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ABSTRACT

A computerized career information system named EUREKA has been developed for California. It originated in 1975-76 under the direction of the Bay Area Computer Educators and since that time has received state and VEA funding. It consists of two major components, Quest and information files. Quest asks users twenty-one questions in order to determine potential occupations suited to their interests and abilities. The information files which provide up-to-date occupational information by specific locations in the state include eight types of information: (1) occupational description; (2) cluster description; (3) career preparation; (4) cluster preparation which suggests high school courses helpful for preparing for a career within a cluster; (5) bibliography of career reference materials; (6) visit, which names persons working in particular occupations who are willing to answer questions and sometimes to provide on-site observation; (7) programs of study and training; and (8) postsecondary schools. (Directions are given for using EUREKA, and the appendixes contain standards for use, the EUREKA Constitution, aide training for the system, information on Quest, two EUREKA conversion tables for the Kuder DD and the Strong-Campbell Interest Inventory, and a glossary.) (ELG)

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inside EUREKA

The California Career Information System

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INSIDE EUREKA is dedicated posthumously to Margaret Thal-Larsen, California's eminent labor market analyst, who generously contributed her expertise, her time, and the financial part of her Vladimir Chavrid Memorial Award (1977) to EUREKA.

"Title VI of the Civil Rights Act states: 'No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.' Therefore VEA programs must be operated in compliance with this law."

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INTRODUCTION

Before you begin to explore this handbook, take a few moments to read the following facts and figures on EUREKA, The California Career Information System.

1. EUREKA is a cooperative of users who wish to improve the career and educational selection process. It has a Board of Directors consisting of representatives elected from among its users, and it has offices located at Diablo Valley College and Richmond High School, where a staff of fifteen work in the areas of information analysis, data entry, user services, computer management, fiscal management, system enhancements, and center management.

2. EUREKA delivers occupational and educational information on 260 occupations, 130 programs of study and training, and over 210 post-secondary schools.

3. EUREKA is the only computerized career and guidance information system which provides data specific to California.

4. EUREKA is used throughout California by public and private secondary schools, community colleges, colleges, universities, CETA Programs, Regional Occupational Programs, and social agencies. Staff have estimated that over 350,000 Californians will use EUREKA during 1978-79.

5. Monetary support for EUREKA has come from the Vocational Education Act, the California Postsecondary Education Commission, and user fees. In addition, in-kind contributions have been made by the Berkeley, Palo Alto, Richmond, and San Francisco school districts; the Contra Costa, Fresno, and San Mateo County offices of education; Diablo Valley and Solano Community Colleges; Cal State Northridge, and the U.S. Army.

6. System field tests have demonstrated the following:

   a. 70% of the users said that the occupational titles which the computer listed for them introduced some new occupations that they would seriously consider for future work.

   b. Users consistently showed that they know more about job prospects than non-users.

   c. Usage averaged 2.3 times per user per year.

   d. 84% of the users said they were satisfied with the system and 77% had recommended it to a friend.

7. At least twelve other states now have systems similar to EUREKA.

8. EUREKA is <u>not</u> a total career guidance system. While the system is designed for independent client use, success of the system is enhanced when counselors and teachers assist the user in interpreting information, clarifying specific needs, and planning future steps.

1 BACKGROUND

THE NAME

"Eureka" in Greek means "I have found it!" Archimedes is said to have used the expression when, after long study, he discovered a method of detecting the amount of alloy mixed with the gold in the king's crown. In English, however, depending upon the context, the word commonly refers to a savings and loan company, a vacuum cleaner manufacturer, several American towns, or the California state motto.

The word now refers to something else as well, the California Career Information System. This EUREKA is a library of occupational and educational information which is stored in computers so it can be updated continually, and so the information can be accessed easily when needed. The originators of this system chose "EUREKA" as the system's nickname because this exclamation aptly describes the verbal reactions of many people who have used the system and have found it to contain just the information they were searching for.

Even though you will most often see "EUREKA" spelled entirely in capital letters when it refers to the California Career Information System, as if it were an acronym, it is not an acronym, at least not one that we know of. We capitalize every letter mostly to distinguish it from savings and loans, vacuum cleaners, towns, and the state motto, but also to identify it with the other computerized guidance and counseling systems it is often compared with: CVIS, GIS, SIGI, and DISCOVER.

In this handbook the word "EUREKA" may be used variously to refer to any of the following: the system in general, the computer program, the consortium, the staff, the information files, the board, or the non-profit corporation. From the context you should be able to distinguish which one is meant in each instance.

THE BEGINNINGS

From the very beginning, EUREKA has been user-oriented. In 1975, an informal, impecunious group called the Bay Area Computer Educators (BACE)* set about selecting a computer-delivered counseling and guidance information system for use by its members. They wanted a system which would be useful in secondary schools as well as in colleges and public service agencies. They wanted a system which would run on many different computers and would provide current, accurate, and local information. They wanted a system which would be easy enough for the unsophisticated user to access, yet informative enough to interest the sophisticated user. They wanted a system which would be relatively inexpensive to implement and one which would run with as few problems as possible. In short, they wanted a system which did not exist in California at that time.

Of all those available, though, the Oregon Career Information System (CIS) came closest to meeting the criteria. CIS had been conceived in 1969 by educators and employment experts and developed at the University of Oregon with grants from the Departments of Labor and HEW (Health, Education, and Welfare). As a system it was almost everything BACE wanted, except for one major drawback--it lacked a California data base. There was no information on California occupations, California programs of study, or California schools; all of this information would have to be developed. CIS contained information strictly for Oregonians.

Yet, groups in Iowa, Washington, Colorado, Minnesota, and Massachusetts had already adopted the basic Oregon system successfully, localizing the data files for their states, and BACE believed that California could do the same. So, in January, 1976, BACE adopted CIS, and with the technical assistance fee supplied by the Richmond School District, the California Career Information System came into being. Instead of hiring a staff to localize the system for California, however, BACE, because it had no funds of its own, had to divide among its members the various tasks to localize CIS for use in California. Berkeley High School was responsible for assembling the Preparation file; the Palo Alto District assumed the task of gathering the Program file data; the Richmond District volunteered to research the occupational information, and Diablo Valley College took the responsibility for entering all the data into the computer.

* At that time BACE consisted of members who worked for Berkeley High School, Contra Costa County Schools, Diablo Valley College, Mills High School, Palo Alto Unified School District, Richmond High School, San Carlos High School, San Francisco Unified School District, Santa Clara County Schools, and the University of San Francisco.

By September, 1976, the system was ready for limited use at BACE sites, and the group had adopted the name "EUREKA." A month later, the Richmond District's Vocational Education Act (VEA) Project to support EUREKA was funded, and EUREKA's prospects for survival started to look promising. User handbooks were printed. The EUREKA Board was established and a constitution adopted. (see Appendix). Users then began to publicize the system throughout the state informing educational institutions and public agencies that a California version of Oregon's widely acclaimed Career Information System was finally available.

In March, 1977, sites which had not participated in the original volunteer efforts began using EUREKA for a fee. In July, 1977, a California Postsecondary Education Commission Title 1 grant to Diablo Valley College enabled EUREKA to improve its files. And in May, 1978, Diablo Valley College and the Richmond School District together secured a VEA grant to provide certain system enhancements. In the future EUREKA will continue to seek grants for improving the system, but the primary support for system maintenance will be user fees.

THE STAFF

Without the efforts of the volunteers who localized and entered EUREKA's first data files, the system never would have materialized, but EUREKA long ago passed the point where volunteers could keep up with all the work involved in maintaining a system as complex as EUREKA for a state as large as California.

EUREKA now, therefore, has its own staff who work in the areas of information analysis, data entry, user services, computer management, fiscal management, system enhancements, and center management. These are the fifteen staff positions:

director of information development
labor market analyst
occupational information analyst
educational information analyst (2)
visit file coordinator
data entry specialist (3)
director of user services
user services coordinator
user services specialist (2)
systems analyst
administrative director

THE CONSORTIUM

EUREKA is a cooperative or consortium of users. (See EUREKA's Constitution in Appendix). Each school, district, institution, and agency which contracts directly with EUREKA to use the system selects a representative who may run as a candidate for the board and participate in the election of new board members. In the spring of the year the consortium holds its annual meeting which is open to anyone and consists of workshops, a general business session, luncheon speaking, election of board members, and a board meeting.

THE BOARD

The board consists of nine members (currently ten) and includes at least one person from each major category of consortium members, as follows: secondary schools, community colleges, county offices of education, and public service agencies. Three times a year, alternating between Northern and Southern California, the Board meets in sessions open to the public to discuss and vote upon matters of interest to users.

THE NON-PROFIT CORPORATION

To facilitate the financial independence and continuity of the system, the Board formed a nonprofit corporation in November, 1977. The corporation contracts with EUREKA's user sites and acts as the fiscal agent to receive user fees and to make disbursements from these funds.

THE ASSOCIATION OF COMPUTER-BASED SYSTEMS FOR CAREER INFORMATION (ACSCI)

Together with most of the systems which have been patterned after CIS, EUREKA belongs to ACSCI, a national consortium for accreditation, training, and technical assistance to advance computer-based occupational and educational information systems for career exploration and planning. Membership enables EUREKA to keep abreast of the latest developments in the field.

2 OVERVIEW

THE CONCEPT

Two aspects of EUREKA make it unique compared to other ways of obtaining career information. The first is its information content and the second is its computer-based delivery.

The information available in EUREKA is extensive and varied and is developed specifically for California. (EUREKA even goes one step beyond localizing the information to California, something no other computer-delivered system does; it localizes information to the area within the state in which the user is interested.) EUREKA's information is organized into these components which are here designated by their computer commands:

DESC: Descriptions of occupations including job duties, working conditions, hiring requirements, wages, and employment outlook.

BIB: A short bibliography for each occupation.

PREP: An explanation of ways to prepare for an occupation, including necessary skills, licensing and training requirements, and tips for employability.

VISIT: Names of people to contact who are actively engaged in each occupation.

PROG: Descriptions of programs of study and training and a list of the institutions where the programs are offered in California.

SCH: Non-academic information about postsecondary schools, including enrollment, costs, housing, and services.

In addition, EUREKA has a component called QUEST, which is sometimes called an access strategy because it provides the user with direction for gaining access

to the occupational information.

QUEST: A 21-item questionnaire which asks the user to evaluate his or her temperaments, abilities, location and earnings preferences, and educational plans. From the user's answers, QUEST produces a list of occupations which the user can explore further by going to the occupational descriptions file.

The second unique aspect of EUREKA is that all of this information is stored in a computer and delivered by the computer at the user's request. Such a system offers some distinct advantages for career counseling:

It can store vast quantities of information;

It can be updated easily with newly revised facts and figures;

It offers fingertip access to various kinds of information with unprecedented speed, ease, and accuracy;

It can patiently and accurately repeat the same process innumerable times;

It can simulate a conversation to assist the user through the system;

It can serve one user or many virtually simultaneously;

It prints a copy for future reference of information relevant to each user; and

It is an enjoyable use of a modern technology which stimulates further career exploration.

Because EUREKA's computerized delivery has an interactive capability, students and clients can use the system themselves without having to rely on an intermediary or having to wait weeks for the return of a computer printout. The user is in control.

HOW EUREKA WORKS

In response to user needs as expressed through open lines of communication and as anticipated by EUREKA staff and other experts in the field of career information, EUREKA's information development staff research data already gathered by various public and private agencies. They then interpret the data and write succinct information statements in understandable language. Using computer terminals, data entry operators enter this information into one central computer on a daily basis. Three times a year a tape from this machine is distributed to all computer

sites which run EUREKA. This new tape, which reflects all the changes and updates made since the previous tape, provides EUREKA users throughout California with the latest career information.

HARDWARE REQUIRED FOR EUREKA

To run EUREKA, one needs a computer terminal, a computer connection, and a computer. Although you wouldn't likely find any of these three in what we commonly call a hardware store, all of them are known as "hardware" in computer jargon.* They are the electronic or mechanical equipment which enter, transmit, store, manage, retrieve, or print computer data.

TERMINALS--There are two basic computer terminals which can be used for running EUREKA, hard-copy and CRT. Both have standard typewriter keyboards, and both convert each typed letter into electronic signals. A hard-copy terminal looks much like an electric typewriter except that it has an extra cord which carries the transmissions to and from the computer. The term "hard copy" refers to this terminal's capability of producing a written record of every message transmitted, a record which can later be reviewed and shared. Good hard-copy terminals for running EUREKA are the Teletype Model 43 and the Decwriter. For portable applications, the Texas Instruments Model 745, which includes a built-in acoustic coupler, works well. A CRT or cathode ray tube terminal has a TV-like screen for visual display of transmitted messages. By itself it cannot produce a written record of those messages; with a special simultaneous hard-copy printer, however, it can. Because each EUREKA user should have a record of using EUREKA, we strongly recommend that a CRT not be used for running EUREKA unless it is used in conjunction with a hard-copy printer. (See Standards for Use in Appendix.)

COMPUTER CONNECTIONS--The type of computer connection used depends upon the location of the computer terminal in relation to the computer. If the computer is nearby, the connection would likely consist of a cord or cable wired directly into the computer, an arrangement called "hardwiring," or if the computer is distant, the terminal may be connected to the computer by a telephone line and certain electronic equipment. The telephone line could be a standard line with a regular dial-up telephone (used with the TI 745) on a lease line installed from

* Because computer people, counselors, and labor market analysts all have their own jargon and because they all play a role in EUREKA, this handbook includes a glossary.

the terminal site to the computer site. One should check the relative costs of these arrangements with Ma Bell.

COMPUTERS--Because EUREKA stores no information about users after they log off the system, it requires only enough computer storage space for its programs and files, and consequently it can run on relatively small computers. It runs on many brands and models of computers, from large machines like the DEC-10 and Burroughs 6000's to what are called mini-computers, the PDP-11 and the Hewlett-Packard 2000's. This wide array of compatible computers which can be used for EUREKA enable institutions to use their own computers or to buy time from whatever nearby computer center offers the most beneficial arrangement.

EUREKA user services staff will assist new users in the selection of equipment.

THEORETICAL BASIS OF THE SYSTEM

Some have criticized the Career Information System structure, which EUREKA uses, on the grounds that it does not rest upon a sound base of sophisticated theory. Also, it has been characterized as grounded mainly in trait-factor theory.

Such criticisms are really unmerited. To be sure, the mechanism whereby a list of occupations is presented to the student is the QUEST questionnaire, and the process by which this list is constructed may be considered as reflecting trait factor theory. However, every system must employ some scheme of linking user attributes to job specifications as a means of access, unless the user is simply to enter the system with a predetermined occupational choice or take cues from a "laundry list" of occupations available beside the terminal.

Others have criticized EUREKA/CIS because it provides no modules designed specifically to "teach values" or to "teach decision-making." One might argue, however, that the tendency of users to re-evaluate their preferences after receiving the list of occupations presented for their further consideration represents, in essence, a creative manipulation of the system leading to increased self-awareness in relation to the occupational decision-making process. Users become aware of how their responses to questions affect the range of occupations appearing on their

lists. As they go back to their questionnaire responses to learn which replies regarding their interests, abilities, and preferences barred given occupations from their lists, an educative process takes place. It is this process that induces self-reflection and an understanding of decision-making that is quite apart from the information provided when the list is used to trigger the release of occupational descriptions.

As far as the theoretical basis of this system is concerned, it may best be described as "eclectic." Or, if the distinction that Donald E. Super makes in the theoretical bases of guidance systems is followed, EUREKA/CIS can be considered as employing the "pragmatic approach." As such, it is essentially an "occupational model" although it can lay some minor claims to being also a career model based tenuously in developmental theory.

3 QUEST

QUEST has a chapter all its own in this handbook for at least four reasons: 1) It is an important component of EUREKA and should be understood thoroughly by those charged with the responsibility of implementing it; 2) It is so deceptively simple to use that it is sometimes misjudged and dismissed as inconsequential, though it is truly a sophisticated tool for accessing occupational information; 3) It is often erroneously considered to be a test unless it is analyzed; and 4) It is a new QUEST being used this year, one which differs enough from the previous version that the changes warrant explanation. (A discussion of the relationship between the earlier QUEST and QUEST 2 is included in the Appendix.)

These are the three divisions in this chapter: QUESTIONS AND ANSWERS ABOUT QUEST, QUEST COMMANDS, and A QUESTION-BY-QUESTION ANALYSIS OF QUEST.

QUESTIONS AND ANSWERS ABOUT QUEST

1. What is QUEST?

   QUEST is twenty-one questions related to the world of work. By answering these questions with certain preferences, the user constructs a personal profile which can be interpreted by the QUEST computer program and matched with occupations to produce a QUEST list.

2. What is a QUEST list?

   A QUEST list is an individualized list of occupations which match the preferences a user has indicated in answers to the various QUEST items.

3. What is the purpose of QUEST?

In the simplest sense, QUEST was designed to help users apply what they know about their interests and abilities in order to understand the world of work better. Specifically, the QUEST process should help users identify some interesting occupations while stimulating them to seek information about jobs and education.

In a recent pilot test of the revised QUEST, over 80% of the users felt QUEST helped them identify "some new occupations to consider for future work." In addition, over 80% of the users studied at least one occupational description after using QUEST.

4. Is QUEST a test?

No, QUEST is not a test, because it neither predicts nor measures. It doesn't tell users something about themselves that they didn't already know. Rather, it is a tool to assist people in identifying new occupations for exploration.

5. How does QUEST aid the counseling process?

In addition to facilitating the acquisition of educational and occupational information, QUEST tends to structure the counseling process constructively; that is, the twenty-one items in QUEST are representative of key considerations in career planning. By discussing the user's response to each question, both the counselor and the client acquire greater insight into the client's preferences.

6. How are occupations eliminated by certain responses?

The 260 occupations in the EUREKA files have been coded for every QUEST question. For instance, the first question asks the user about "continuous work." Using a variety of data sources, a EUREKA analyst studies each occupation to see if it requires "continuous work" and codes the occupation accordingly. Those occupations requiring "continuous work" will be eliminated from a user's list if he or she answers "no" to the first question. This coding process is completed for every QUEST question as it relates to every EUREKA occupation. You may examine the attribute coding for any occupation by typing ATTR and the occupation's four-digit number. See page 3-14 for an explanation of this command and for a sample printout.

It is important to note that an occupation is coded for a particular attribute when there are "reasonable prospects for a career" in the occupation for people with that attribute. While no "requirement" is absolute, the QUEST list attempts to identify those occupations which have the greatest probability of matching the user's interests.

7. What is the average length of a QUEST list?

After completing QUEST, most users find five to forty occupations remain on their lists. It is important to note, however, that individual users' lists may vary significantly from this average depending upon how clearly they understand themselves and also upon how realistic their preferences are. QUEST is an individualized instrument. Users' QUEST lists will and should differ from this norm on occasion.

8. Why might a user sometimes get a QUEST list with few or no occupations?

This user has been too restrictive in answering the questions. Perhaps he or she wants a starting salary of $1,250 a month, will seek no education or training beyond high school, and prefers to use only low levels of several abilities on a job. Such a user is likely to receive very few or no occupations on a QUEST list. The computer has been programmed to forestall the disappointment this user feels at seeing the message, "Oops, you have run out of occupations on your QUEST list." It automatically prints a warning that the number of remaining occupations has dipped below 14 even though the user has answered only a few questions. The user could then ask to see the list without answering further questions.

This user should be encouraged to re-evaluate certain preferences and to be less restrictive in answering the questions. To change to less restrictive answers, this user could use the CHANGE command, or to start QUEST over, this user could merely type QUEST again. Otherwise this user could be encouraged to think of occupations he or she is interested in and to use the WHY NOT command. Then QUEST becomes a valuable tool for reflecting reality, indicating that a lower salary or higher level abilities are called for.

9. Why might a user receive a lengthy QUEST list?

Users with long QUEST lists often answer "no preference or I'm not sure." or "I want to make no more than at least the minumum wage to start."

They are willing to use a high level of several abilities in their work and are willing to attend a high number of years of education and training. These users should be encouraged to re-evaluate their answers and consider being more restrictive as they change answers.

10. How were the QUEST questions selected?

Originally a group of counselors and career development specialists generated a list of variables related to the world of work which they thought useful for people to consider during the career planning process. The list was then reviewed by a group of labor market analysts who selected those variables for which labor market data existed to analyze and categorize occupations. Through the process of considerable testing and revision, the current QUEST has evolved.

11. What criteria were used in developing the QUEST questionnaire?

For a diverse user population QUEST should

- be understandable.
- address issues about which users are able and willing to express a preference.
- be coded from the most reliable labor market data.
- address issues which users perceive to be relevant to the career selection process.
- provide response categories which accurately reflect users' preferences.
- be a reasonable length.

The QUEST list should

- identify new relevant occupations for the user.
- exclude most occupations which are clearly irrelevant to the user.

QUEST and the QUEST list should

- actively facilitate the user's entrance into the information files.
- make an impact on the user's career plans.

QUEST Commands Available to All Users

Because QUEST is a searching process rather than a test, you will want to be familiar with QUEST commands and how they enable the user to experiment with the QUEST list. These commands, listed on page 26 of the User Handbook, allow users to monitor the lengths of their lists, find out why certain occupations were not on their lists, evaluate the effects of various responses, and re-evaluate and change answers. Using the commands can lead to increased user satisfaction and a better understanding of the occupational decision-making process. Here then are the commands, together with their features and suggested uses.

Command: HOW MANY

Features: Find out HOW MANY occupations remain on your list.

Suggested Uses: Encourage the use of HOW MANY when:

- the user wants to know how many occupations remain;
- the user wants to know how many occupations will be eliminated by a certain response (the user should ask HOW MANY right before and after the response);
- the user is entering mostly non-eliminating responses (YES, NP, NS) and needs to be more definite in his or her answers; or
- the user is interested in getting a list before completing all the QUEST questions and wants to know how long the list will be.

Command: LIST

Features: Find out which occupational titles remain on your list.

Suggested Uses: Encourage the use of LIST when:

- the user wants to know what occupations remain on his or her list; or

- the user wants to know which occupations were eliminated by a certain response.
- Instruct the user to type LIST before and after entering the response (after getting this first list, the user should type FINISH to return to the questionnaire).

Command: WHY NOT __(occ #)__

Features: Learn why a particular occupation did not appear on your occupational list.

Suggested Uses: Encourage the use of WHY NOT when:

- the user wants to know why a particular occupation was eliminated from the occupational list.
- the user needs assistance in knowing which responses to change in order to lengthen the list; or
- the user wants to follow a particular occupation throughout QUEST to see if it is still on the list or to see what answers eliminated it.

Command: CHANGE

Features: Change answers to questions you've already answered.)

Suggested Uses: Encourage the use of CHANGE when:

- the user wants to change answers to questions he or she has already answered;
- the user has run out of occupations; or
- the user has a large number of occupations on his or her list and wishes to make some responses more selective.

Command: FINISH

Features: Finish answering the questionnaire after an interruption by another command.

Suggested Uses: Encourage the use of FINISH when:

- the user wishes to finish answering the questionnaire. The program will print the first unanswered question, then continue through to the end of QUEST; or
- the user has asked for a LIST, has typed WHY NOT for an occupation, or has left the questionnaire to get occupational information and then wishes to finish answering the questionnaire.

The sample QUEST ANSWER SHEET and the QUEST computer printout on the next pages illustrate how the user's prepared responses to QUEST appear in the computer printout and also how some of the various QUEST commands work.

Remember that any QUEST command and any of the other EUREKA commands may be used at any time.

EUREKA **QUEST ANSWER SHEET** Name EUREKA USER

Nature of Work: (Circle your choice)

1. CONTINUOUS (YES (NO) NP)
2. PRECISE (YES (NO) NP)
3. USING FACTS (YES) NO NP)
4. WORKING WITH OTHERS (YES) NO NP)
5. PERSUADING, SELLING (YES (NO) NP)
6. DECISION-MAKING (YES (NO) NP)
7. CHANGE (YES) NO NP)
8. CREATIVE (YES (NO) NP)

Abilities:

9. EYE-HAND COORDINATION (ELO (EM) EHI ENS)
10. WORKING WITH FINGERS (FLO (FM) FHI FNS)
11. CHECKING ACCURACY (CLO (CM) CHI CNS)
12. ABILITY WITH WORDS (VLO (VM) VHI VNS)
13. ABILITY WITH NUMBERS (NLO (NM) NHI NNS)
14. CATCHING ON TO THINGS (GLO (GM) GHI GNS)
15. SEEING DETAIL (DLO (DM) DHI DNS)
16. PHYSICAL ACTIVITY (YES (CD) NP)
    (If answer is CD, then (MED) LIGH SIT NP)

Preparation:

17. EDUCATION AND TRAINING (NO HS ONE TWO (FOUR) ANY)

Earnings:

18. BEGINNING WAGE (NI MIN (700) 1000 1250 1500)

Working Conditions:

19. WORK SETTING (IN (OUT) NP)

Location:

20. CITY SIZE (LM (SC) RUR LMSC SCR NP)
21. REGION (ISF) SAC LA OTHER CAL US)

List 3 occupations which you are now considering (include code numbers).

8127 PHYSICAL THERAPIST 8416 SOCIAL WORKER 8128 AUDIOLOGISTS

List 3 programs of study and training (code numbers too).

374 PHYSICAL THERAPY 565 SOCIAL SERVICE 237 SPECIAL EDUCATION

Want information about any schools listed in the handbook? Write down their code numbers and the school topic numbers. (See school file instructions.)

21411 CAL STATE, CHICO 21066 D.V.C. 21080 ST MARY'S

3-8 School Topics 1-5, 23, 75-77, 85, 88

QUEST

(sample computer printout)

```
HELLO; PLEASE ENTER YOUR NAME, THEN PUNCH THE 'RETURN' KEY.
EUREKA USER
HELLO EUREKA USER,
YOU ARE LOGGED IN TO EUREKA - THE
CALIFORNIA CAREER INFORMATION SYSTEM.
HOW DO YOU WANT TO START?
IF YOU FILLED OUT THE QUESTIONNAIRE IN YOUR HANDBOOK,
        TYPE IN: 'QUEST.'
IF THERE ARE OCCUPATIONS, EDUCATIONAL PROGRAMS,
OR SCHOOLS YOU WANT INFORMATION ABOUT,
        TYPE IN: 'INFO.'
INFO FILES UPDATED:     9-1-78
?

 QUEST
  WE WILL NOW BEGIN.  AS EACH QUESTION IS LISTED, LOOK
TO SEE HOW YOU ANSWERED IT IN YOUR USER'S HANDBOOK,
THEN TYPE IN THE CODE YOU CIRCLED.  DON'T FORGET TO
PUNCH THE 'RETURN' KEY AFTER EACH RESPONSE.
HERE IS YOUR FIRST QUESTION:
   01 CONTINUOUS (YES,NO,NP)
?NO
   02 PRECISE (YES,NO,NP)
?NO
   03 USING FACTS (YES,NO,NP)
?YES
THERE ARE 98   OCCUPATIONS THAT MEET ALL YOUR RESPONSES.
ANY TIME YOU WANT TO KNOW HOW MANY OCCUPATIONS ARE
LEFT ON YOUR LIST, TYPE:  HOW MANY
   04 WORKING WITH OTHERS (YES,NO,NP)
?YES
   05 PERSUADING, SELLING (YES,NO,NP)
?NO
   06 DECISION MAKING (YES,NO,NP)
?NO
   07 CHANGE (YES,NO,NP)
?YES
   08 CREATIVE (YES,NO,NP)
?NO
   09 EYE-HAND COORDINATION (ELO,EM,EHI,ENS)
?EM
   10 WORKING WITH FINGERS (FLO,FM,FHI,FNS)
?CM
I CANNOT UNDERSTAND THAT RESPONSE.  PLEASE REPLY AGAIN.
IF YOU ARE ANSWERING QUESTION 10   REPLY WITH
FLO,FM,FHI, OR FNS
?FM
   11 CHECKING ACCURACY (CLO,CM,CHI,CNS)
?HOW MANY
 40   OCCUPATIONS REMAIN.
   11 CHECKING ACCURACY (CLO,CM,CHI,CNS)
?CM
   12 ABILITY WITH WORDS (VLO,VM,VHI,VNS)
?VM
```

User responses are underlined here for clarity.

The computer always prints this message after the user answers the third question. The number of occupations which remains at this point will vary according to the users' answers to the first three questions.

If the user answers a question with any response other than those in parenthesis, the computer will indicate that it cannot understand, and it will once again offer the choice.

QUEST (cont.)

(sample computer printout)

```
   13 ABILITY WITH NUMBERS (NLO,NM,NHI,NNS)
?NM
   14 CATCHING ON TO THINGS (GLO,GM,GHI,GNS)
?GM
   15 SEEING DETAIL (DLO,DM,DHI,DNS)
?DM
   16 PHYSICAL ACTIVITY (YES,CD,NP)
?CD
WHAT IS THE MOST ACTIVITY YOU WOULD BE ABLE AND WILLING
TO DO?

MEDIUM     MOVING AROUND A LOT AND HANDLING
           OBJECTS OF 10 TO 25 POUNDS                MED

LIGHT      MOVING AROUND SOME AND HANDLING
           OBJECTS USUALLY UNDER 10 POUNDS           LIGH

SITTING    RARELY MOVING AROUND.  USUALLY
           SITTING.                                  SIT

NO PREFERENCE OR I'M NOT SURE                        NP

(TYPE IN:  MED, LIGH, SIT OR NP)
?MED
   17 EDUCATION AND TRAINING (NO,HS,ONE,TWO,FOUR,ANY)
?FOUR
   18 BEGINNING WAGE (NI,MIN,700,1000,1250,1500)
?700
   19 WORK SETTING (IN,OUT,NP)
?OUT
   20 CITY SIZE (LM,SC,RUR,LMSC,SCR,NP)
?SC
   21 REGION (SF,SAC,LA,OTHER,CAL,US)
?SF
THERE ARE 3    OCCUPATIONS THAT CORRESPOND TO THE
ANSWERS YOU GAVE.
'QUEST' LIST FOR EUREKA USER

  LABORATORY OCCUPATIONS  (2600):
2674  SANITARIANS

  AGRICULTURE & FORESTRY OCCS  (4100):
4126  FISH AND WILDLIFE SPECIALISTS

  PROTECTIVE SERVICE OCCUPATIONS  (9400):
9414  LAW ENFORCEMENT OFFICERS

THIS IS A SHORT LIST AND YOU SHOULD NOT RESTRICT YOURSELF
TO THESE OCCUPATIONS, BUT THEY MAY SUGGEST SOME AREAS
THAT YOU WILL WANT TO EXPLORE FURTHER.

CHECK FOR THE OCCUPATIONS YOU ARE NOW CONSIDERING.
ARE THEY ON THE LIST?  TYPE IN: 'YES' OR 'NO'
?NO
LET'S FIND OUT WHY NOT.
  TYPE IN 'WHY NOT' AND AN OCCUPATION CODE.
  EXAMPLE:  WHY NOT 2674
```

The QUEST list is arranged by cluster with the Administrative Occupations (1100), the lowest number, printed first, followed by the Clerical Occupations (1400), and so forth.

If the user indicates that the list did not include occupations now being considered, the computer prompts the user to use the "WHY NOT" command.

QUEST (cont.)

(sample computer printout)

```
WHY NOT 8127
 8127    PHYSICAL THERAPISTS ELIMINATED BY THE FOLLOWING RESPONSE(S):
WORK SETTING 19=OUT
YOU CAN CHANGE ANSWERS AND THE LIST BY TYPING IN 'CHANGE'.

?CHANGE
ENTER 'CHANGE' THEN UP TO FIVE QUESTION NUMBERS AND CODES.
EXAMPLE:  CHANGE 19=IN,17=ANY,...   A DASH (-) MAY BE USED
INSTEAD OF AN EQUAL SIGN (=).
?
 CHANGE19=IN
IT MAY TAKE A WHILE TO MAKE YOUR CHANGES; BE RIGHT BACK.
 12   OCCUPATIONS REMAIN.
TO GET A NEW QUEST LIST, TYPE IN 'LIST'.
?LIST
 12   OCCUPATIONS REMAIN.
'QUEST' LIST FOR EUREKA USER

  BOOKKEEPING, ACCOUNTING & COMPUTER OCCS  (1600):
1634  APPRAISERS
1636  LOAN OFFICERS

  LABORATORY OCCUPATIONS  (2600):
2674  SANITARIANS

  AGRICULTURE & FORESTRY OCCS  (4100):
4126  FISH AND WILDLIFE SPECIALISTS

  TRANSPORTATION OCCUPATIONS  (6100):
6142  TAXI DRIVERS

  STOCK CONTROL OCCUPATIONS  (7100):
7116  SHIPPING AND RECEIVING CLERKS

  FOOD SERVICE OCCUPATIONS  (7800):
7852  BARTENDERS

  HEALTH SERVICE OCCUPATIONS  (8100):
8117  PHYSICIAN'S ASSISTANTS
8127  PHYSICAL THERAPISTS
8182  MORTICIANS

  SOCIAL SERVICE OCCUPATIONS  (8400):
8462  LIBRARIANS

  PROTECTIVE SERVICE OCCUPATIONS  (9400):
9414  LAW ENFORCEMENT OFFICERS
```

Exercising the CHANGE command enables the user to obtain a new list by changing up to five answers at once rather than starting all over again.

Special QUEST Commands (for counselors only)

There are two special QUEST commands available, BATCH QUEST and ATTR. They are not mentioned in the User Handbook as being available, however, because they tend to confuse users and because users generally require extra assistance to use them, but they can be especially useful to the counselor in certain instances.

Command:	BATCH QUEST
Features:	Input as many as five QUEST responses at a time in any sequence.
Suggested Uses:	BATCH QUEST is used in several learning activities to allow the user to see how one or several responses affect the occupational list. By inputting a single response, such as "Low ability with numbers" for Question 13, users see how many occupations are eliminated by that response alone, independent of other responses.

By inputting several responses, a counselor may construct a QUEST list for a client who has a few very definite requirements for a job. As an example, let's assume that a middle-aged divorced woman with children is feeling depressed because she thinks she will have to work as a secretary, an occupation which she abhors. Her major job criteria are that she does not want repetitious work (01=NO), she dislikes precision work (02=NO), she has low ability with numbers (13=NLO), she is unable to lift heavy objects (16=CD), she must earn at least $1000 a month (18=1000), and she must work in the area. The counselor types BATCH QUEST, then enters her responses (01=NO, 02=NO, 13=NLO, 16=CD, 18=1000). The counselor next specifies the city size and area and asks for a LIST. With this list (see sample printout on the next page), the counselor can begin to discuss the client's options.

BATCH QUEST

(sample computer printout)

```
 BATCH QUEST
ENTER CLIENT'S NAME.

?EUREKA USER
YOU MAY ENTER UP TO FIVE QUESTION NUMBERS AND CODES
IN ANY SEQUENCE.  EXAMPLE: 05=YES,17=FOUR,19=IN,...
?
 01=NO, 02=NO, 13=NLO, 18=1000, 16=CD

WHAT IS THE MOST ACTIVITY YOU WOULD BE ABLE AND WILLING
TO DO?

MEDIUM     MOVING AROUND A LOT AND HANDLING
           OBJECTS OF 10 TO 25 POUNDS                MED

LIGHT      MOVING AROUND SOME AND HANDLING
           OBJECTS USUALLY UNDER 10 POUNDS           LIGH

SITTING    RARELY MOVING AROUND.  USUALLY
           SITTING.                                  SIT

NO PREFERENCE OR I'M NOT SURE                        NP

(TYPE IN:  MED, LIGH, SIT OR NP)
?NP
 5    OCCUPATIONS REMAIN.

YOU MAY ENTER UP TO FIVE MORE QUESTION NUMBERS AND
ANSWERS.
WHEN YOU ARE READY TO GET A LIST OF OCCUPATIONAL
TITLES TYPE IN 'LIST'.
?
20=LMSC, 21=SF

 3    OCCUPATIONS REMAIN.
?
 LIST
 3    OCCUPATIONS REMAIN.
'QUEST' LIST FOR EUREKA USER

  TRANSPORTATION OCCUPATIONS  (6100):
6141  BUS DRIVERS
6142  TAXI DRIVERS

  HEALTH SERVICE OCCUPATIONS  (8100):
8117  PHYSICIAN'S ASSISTANTS
CIS/SF BAY AREA
```

Command: ATTR __(occ #)__

Features: This command prints an occupation's QUEST attributes, each of which corresponds to a QUEST answer. Those listed are all the responses which will retain the occupation on the user's QUEST list. Missing responses are those which would eliminate the occupation from the user's QUEST list. Consider, for example, all the possible answers for question 14, Catching on to Things: GLO, GM, GHI, and GNS. Now look at the sample attribute printout for 8127 Physical Therapists and you'll notice that GLO is missing. A GLO answer, then, would eliminate Physical Therapists from a user's QUEST list while the other responses would retain it.

```
 ATTR8127
 8127     PHYSICAL THERAPISTS

01=YES     01=NO      01=NP
02=YES     02=NO      02=NP
03=YES     03=NO      03=NP
04=YES     04=NP
05=YES     05=NO      05=NP
06=YES     06=NO      06=NP
07=YES     07=NP
08=YES     08=NO      08=NP
09=EM      09=EHI     09=ENS
10=FM      10=FHI     10=FNS
11=CM      11=CHI     11=CNS
12=VM      12=VHI     12=VNS
13=NM      13=NHI     13=NNS
14=GM      14=GHI     14=GNS
15=DM      15=DHI     15=DNS
16=LIGH    16=MED     16=YES     16=NP
17=FOUR    17=ANY
18=NI      18=MIN     18=700     18=1000    18=1250
19=IN      19=NP
20=LM      20=SC      20=RUR     20=LMSC    20=SCR     20=NP
21=SF      21=SAC     21=LA      21=CAL     21=US
```

QUESTION-BY-QUESTION ANALYSIS OF QUEST

The following analysis of QUEST is intended to familiarize you with the worker trait and/or labor market concepts involved in each question and to provide you with examples of these concepts as they are interpreted by labor market analysts.

1. CONTINUOUS On some jobs you do the same things many times a day and you work at a steady pace. Would you want to do this type of work?

	CODE WORD
Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

Concept: **Jobs where continuousness is a factor require an adaptability to performing repetitive work, that is doing the same tasks over and over following a set procedure, sequence, or pace. This work is performed according to a routine or set sequence and there is an absence of diversion of alternative ways to do the task, or of room for independent judgment.**

Examples of occupations requiring "continuous" work:

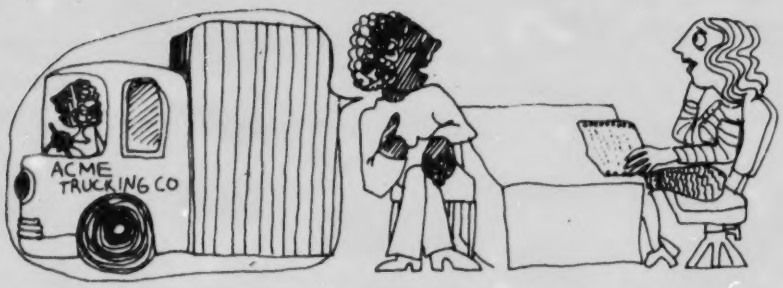
5926 Production Painters and Finishers

6144 Truck Drivers

Examples of occupations not requiring "continuous" work:

5464 Machinists

6141 Bus Drivers



2. PRECISE On some jobs there is little room for error so you must be very exact in your work. Would you want to do this type of work?

Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

Concept: Jobs where precision is a factor require an adaptability to situations involving the precise attainment of set limits, tolerances, or standards. The worker must be precise, thorough, exacting, or meticulous in regard to material worked; or in activities such as numerical determinations, record preparation, or inspecting.

Examples of occupations requiring "precise" work:

2672	Quality Control Inspectors	5626	Electricians
4586	Cabinetmakers	8124	Pharmacists

Examples of occupations not requiring "precise" work:

4146	Floral Designers
4724	Commercial Artists and Designers

3. USING FACTS On some jobs you may have to inspect and analyze factual information to reach conclusions. Would you want to do this type of work?

Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

Concept: Jobs where using facts is a factor require an adaptability to making generalizations, judgments, or decisions based on measurable or verifiable criteria. The worker makes evaluations on the basis of data and sometimes may appear to be making evaluations on the basis of senses or experience, while actually using memorized data.

Examples of occupations requiring "using facts" on the job:

1614	Accountants	4274	Plumbers
1634	Appraisers	8115	Optometrists

Examples of occupations not requiring "using facts" on the job:

1195	Public Relations Workers
7418	Automobile Salespeople

4. WORKING WITH OTHERS On some jobs you must deal with many different people to get your work done. Would you want to do this type of work?

Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

Concept: Jobs where working with others is a factor require an adaptability to dealing with people beyond giving and receiving instructions. The worker must relate to people in situations involving more than giving or receiving instructions.

Examples of occupations requiring "working with others":

2314	Urban Planners	7856	Flight Attendants
7416	Insurance Salespeople	8182	Morticians

Examples of occupations not requiring "working with others":

1416 Clerk Typists

5686 Electronics Assemblers

5. PERSUADING, SELLING On some jobs you sell or try to convince people of something. Would you want to do this type of work?

Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

Concept: Jobs where persuading or selling is a factor require an adaptability to influencing people in their opinions, attitudes, or judgments about ideas or things. The worker is in a position to motivate, convince, or negotiate.

Examples of occupations requiring "persuading, selling":

1136 Education Administrators

7414 Commercial Salespeople

Examples of occupations not requiring "persuading, selling":

3112 Automobile Mechanics

8486 Recreation Leaders

6. DECISION-MAKING On some jobs you are responsible for making final decisions about projects, plans and other people's duties. Would you want to do this type of work?

Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

Concept: Jobs where decision making is a factor require an adaptability to accepting responsibility for the direction, control, or planning of an activity. The worker is in a position to negotiate, organize, direct, supervise, formulate practices, or make final decisions. Planning only for one's own activities would not be included here.

Examples of occupations requiring "decision making":

2164	Social Program Planners	6128	Railroad Conductors
4124	Foresters	8116	Dieticians

Examples of occupations not requiring "decision making":

1428	Library Assistants
4324	Bakers

7. CHANGE On some jobs you must move often from one task to another and use several different skills. Would you want to do this type of work?

Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

Concept: Jobs where change is a factor require an adaptability to performing a variety of duties, often changing from one task to another of a different nature without loss of efficiency or composure. Several duties, all requiring the same or very similar skills, knowledge, and abilities do not constitute variety, which is the key word in the "change" factor. If, however, the several duties in a job indicate significant differences in technologies, techniques, and procedures environmental factors and physical demands, or work situations, then change would be considered a factor.

Examples of occupations requiring "change":

1132	Hotel and Motel Managers	3422	Building Maintenance Workers
1411	Office Managers		

Examples of occupations not requiring "change":

1635	Underwriters
9842	Models

8. CREATIVE On some jobs you must interpret ideas and express feelings in creative ways. Would you want to do this type of work?

Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

Concept: Jobs where creativity is a factor require an adaptability to situations involving the interpretation of feelings, ideas, or facts in terms of personal viewpoint. "Interpretation" is defined as an individual's concept of work of art, subject, plan, etc. as shown in performance, criticism, artistic representation, or the like.

Examples of occupations requiring "creative" work:

2174 Freelance Writers
9866 Performing Artists
4734 Photographers

Examples of occupations not requiring "creative" work:

4424 Textile Machine Operators
5664 Broadcast Technicians

9. EYE-HAND COORDINATION You would need to be good at handling things quickly as you see them. You might have to be quick and accurate at sorting or operating things. Mark the highest level or coordinating eye and hand movements you want to use on a job.

Low ability to coordinate eye and hand movements	ELO
Medium ability to coordinate eye and hand movements	EM
High ability to coordinate eye and hand movements	EHI
I'm not sure how much of this ability I want to use	ENS

Concept: Jobs where eye-hand coordination is a factor require the ability to coordinate eyes and hand or fingers rapidly and accurately in making precise movements with speed and the ability to make movement responses accurately and swiftly.

Example of an occupation requiring a low level of "eye-hand coordination":

4124 Foresters

Examples of occupations requiring a medium level of "eye-hand coordination":

4446 Tailors and Dressmakers
8114 Veterinarians

Example of an occupation requiring a high level of "eye-hand coordination":

2359 Electronics Technicians

10. WORKING WITH FINGERS You would need to be able to do very precise work with your fingers. You might have to handle small things easily, quickly and accurately. Mark the highest level of working with fingers you want to use on a job.

Low ability to work with fingers	FLO
Medium ability to work with fingers	FM
High ability to work with fingers	FHI
I'm not sure how much of this ability I want to use	FNS

Concept: Jobs where working with fingers is a factor require the ability to move the fingers and to manipulate small objects with the fingers rapidly and/or accurately.

Example of an occupation requiring a low level of "working with fingers":

2674 Sanitarians

Examples of occupations requiring a medium level of "working with fingers":

3118 Small Engine Repairers 4146 Floral Designers

Example of an occupation requiring a high level of "working with fingers":

8112 Physicians

11. CHECKING ACCURACY You would need to copy words or numbers accurately. You might have to be good at things like proofreading written material. Mark the highest level of checking accuracy you want to use on a job.

Low ability for checking accuracy	CLO
Medium ability for checking accuracy	CM
High ability for checking accuracy	CHI
I'm not sure how much of this ability I want to use	CNS

Concept: Jobs where checking accuracy is a factor require the ability to perceive pertinent detail in verbal or tabular material and the ability to observe differences in copy, to proofread words and numbers, and to avoid perceptual errors in arithmetic computations. A measure of speed of perception is required in many industrial jobs even when the job does not have verbal or numerical content.

Examples of occupations requiring a low level of "checking accuracy":

3184 Jewelers 9476 Security Guards

Examples of occupations requiring a medium level of "checking accuracy":

7122 Mail Carriers 1186 Personnel Managers

Example of an occupation requiring a high level of "checking accuracy":

2629 Astronomers

12. ABILITY WITH WORDS You would need to read and follow instructions. You might have to express yourself clearly when writing or talking with people. Mark the highest level of ability with words you you want to use on a job.

Low ability with words	VLO
Medium ability with words	VM
High ability with words	VHI
I'm not sure how much of this ability I want to use	VNS

Concept: Jobs where use of words is a factor require the ability to understand meanings of words and to use them effectively, as well as the ability to comprehend language, to understand relationships between words and to understand meanings of whole sentences and paragraphs.

Example of an occupation requiring a low level "ability with words":

4516 Chokersetters

Examples of occupations requiring a medium level "ability with words":

8458 Education Programs Specialists

1424 Travel Agents

Examples of occupations requiring a high level "ability with words":

2314 Urban Planners

2174 Freelance Writers

13. ABILITY WITH NUMBERS You would need to do addition, subtraction, multiplication, and division. You might have to solve arithmetic problems quickly and correctly. Mark the highest level of ability with numbers you want to use on a job.

Low ability with numbers	NLO
Medium ability with numbers	NM
High ability with numbers	NHI
I'm not sure how much of this ability I want to use	NNS

Concept: Jobs where use of numbers is a factor require the ability to perform arithmetic operations quickly and accurately.

Examples of occupations requiring a low level "ability with numbers":

8459 Child Care Workers

8184 Barbers

Examples of occupations requiring a medium level "ability with numbers":

9824 Radio and Television Announcers

3164 Office Machine Repairers

Examples of occupations requiring a high level "ability with numbers":

2332 Mathematicians

2316 Architects

14. CATCHING ON TO THINGS You would need the ability to learn procedures and understand the reasoning behind them. You might have to be good at figuring out complicated things. Mark the highest level of catching on to things you want to use on a job.

Low ability to catch on to things	GLO
Medium ability to catch on to things	GM
High ability to catch on to things	GHI
I'm not sure how much of this ability I want to use	GNS

Concept: Jobs where catching on to things is a factor require general learning ability, that is, the ability to "catch on" or understand instruction and underlying principles and the ability to reason and make judgments, all of which is closely related to doing well in school.

Examples of occupations requiring a low level of "catching on to things":

3455 Janitors
4424 Textile Machine Operators

Examples of occupations requiring a medium level of "catching on to things":

3112 Automobile Mechanics
8164 Licensed Vocational Nurses

Examples of occupations requiring a high level of "catching on to things":

2416 Ceramic Engineers
8114 Veterinarians

15. SEEING DETAIL You would need to be able to tell slight differences in shapes in objects and lengths of lines. You might have to be able to see detail in objects, pictures or drawings. Mark the highest level of seeing detail you want to use on a job.

Low ability to see detail	DLO
Medium ability to see detail	DM
High ability to see detail	DHI
I'm not sure how much of this ability I want to use	DNS

Concept: Jobs where seeing detail is a factor require the ability to perceive pertinent detail in objects or in pictorial or graphic material. Also required is the ability to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures and widths and lengths of lines.

Example of an occupation requiring a low level of "seeing detail":

4328 Commercial Fishers

Example of an occupation requiring a medium level of "seeing detail":

1152 Construction Superintendents

Example of an occupation requiring a high level of "seeing detail":

2316 Architects

16. PHYSICAL ACTIVITY Jobs require different amounts of physical activity. Would you be able and willing to be very active, often handle 50 pound objects and lift 100 pounds or more?

Yes, I would	YES
No, (I couldn't or wouldn't want to)	CD
No preference or I'm not sure	NP

(If user answers 'CD' the following text message will appear)

What is the most activity you would be able and willing to do?

MEDIUM	Moving around a lot and handling objects 10 to 25 pounds	MED
LIGHT	Moving around some and handling objects usually 10 pounds	LIGH
SITTING	Rarely moving around. Usually sitting	SIT
NO PREFERENCE or I'm not sure		NP

Concept: Sedentary Work--Lifting 10 pounds maximum and occasionally lifting and/or carrying such articles as dockers, ledgers, and small tools. Although a sedentary job is defined as one which involves sitting, a certain amount of walking and standing is often necessary in carrying out job duties. Jobs are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.

Light Work--Lifting 20 pounds maximum with frequent lifting and/or carrying objects weighing up to 10 pounds. Even though the weight lifted may be only a negligible amount, a job will be in this category (1) when it requires walking or standing to a significant degree or (2) when it requires sitting most of the time but entails pushing and pulling of arm and/or leg controls.

Medium Work--Lifting 50 pounds maximum with frequent lifting and/or carrying of objects weighing up to 25 pounds.

Heavy Work--Frequent lifting and/or carrying of 50 pound objects and sometimes lifting objects in excess of 100 pounds.

Examples of occupations requiring a heavy level of "physical activity":

8166 Nurse Aides and Orderlies 9426 Fire Fighters

Examples of occupations requiring a medium level of "physical activity":

8459 Child Care Workers 7122 Mail Carriers

Examples of occupations requiring a light level of "physical activity":

3164 Office Machine Repairers 7852 Bartenders

Examples of occupations requiring a sedentary level of "physical activity":

1454 Telephone Operators 2364 Drafters

17. EDUCATION AND TRAINING How much education and training will you have when you enter your career field? Consider your present education plus additional education you would take. Circle the longest education or training program you would be willing to complete.

No special education, training or experience before starting the job	NO
No more than high school graduation (or G.E.D.) and a short training period	HS
Up to one year of full-time schooling (or two years of apprentice-type training)	ONE
Up to two to three years of full-time schooling (or three to four years of apprentice-type training)	TWO
Up to four-year college degree or equivalent	FOUR
Any amount of education, including university graduate school training	ANY

Concept: Education and training includes community colleges, universities, high schools, proprietary institutions, private vocational schools, formal apprenticeship programs, G.E.D. programs, and any formal mechanisms of career preparation other than learning skills on the job. The more education and training a user is willing to receive, the more occupations will remain on his or her QUEST List. It is important to remember that "ANY" education implies post-graduate education and that an "ANY" response eliminates no occupations; the user, in effect, is saying that he or she will complete whatever education is required for the job; in other words, education is not a factor.

Examples of occupations which require "no special education or training":

6158 Fork Lift Operators 5686 Electronics Assemblers

Examples of occupations which require "high school graduation or equivalent":

1616 Bookkeepers 9414 Law Enforcement Officers

Examples of occupations which require "up to one year of full-time education": or training beyond high school":

8168 Emergency Medical Technician 8186 Cosmetologists

Examples of occupations which require "up to two or three years of full-time education or training beyond high school":

5626 Electricians 8174 Dental Hygienists

Examples of occupations which require "a four-year college degree":

2428 Mechanical Engineers 8125 Occupational Therapists

Examples of occupations which require "any amount of education":

2629 Astronomers 8414 Counselors

18. BEGINNING WAGE How much must an occupation pay (for regular, full-time work) before you would consider it? These wages refer to the average starting rate before deductions; you would earn more with experience.

Not sure or not important at this time	NI
At least the minimum wage to start	MIN
At least $700 - $900 per month ($4.03 - $5.75 per hour)	700
At least $1,000 - $1,249 per month ($5.76 - $7.20 per hour)	1000
At least $1,250 - $1,499 per month ($7.21 - $8.64 per hour)	1250
At least $1,500 per month ($8.65 per hour)	1500

Concept: These wage rates refer to <u>beginning</u>, <u>entry-level</u> wages. In most occupations wages will go up as the employee gains experience. The higher the beginning wages a user desires, the smaller the number of jobs which will be available.

Examples of occupations which fall within the "minimum starting wage":

7884 Kitchen Helpers 4464 Laundry and Dry Cleaning Workers

Examples of occupation with starting salaries which fall within the "$700-$999" range:

1414 Stenographers 2359 Electronics Technicians

Examples of occupations with starting salaries which fall within the "$1000-$1249" range:

1682 Systems Analysts 8425 Occupational Therapists

Examples of occupations with starting salaries which fall within the "1250-$1499" range:

2416 Ceramic Engineers 3116 Aircraft Mechanics

Examples of occupations with starting salaries which fall within the "1500" range:

6188 Pilots & Flight Engineers 8113 Dentists

19. WORK SETTING Where would you like to work?

Mostly indoors or under shelter	IN
Mostly outdoors	OUT
No preference or I'm not sure	NP

Concept: Indoors -- Protection from weather conditions but not necessarily from temperature changes.

Outdoors -- No effective protection from weather.

Examples of occupations which involve mostly "indoor" work:

6172	Railroad Engineers	6144	Truck Drivers
7856	Flight Attendants	6188	Pilots & Flight Engineers

Examples of occupations which involve mostly "outdoor" work:

4328	Commercial Fishers	4278	Roofers

20. CITY SIZE Some people want to work only in a large city; others want to work in a small city; others want to work in a small town. What size community are you willing to work in?

Only in a large city (like Los Angeles, San Francisco, San Diego)	LM
Only in a small city (like Salinas, Bakersfield, San Bernardino)	SC
Only in a small town, rural area	RUR
In a large city or small city, but not a small town or rural area	LMSC
In a small city, small town, or rural area, but not a large city	SCR
No preference about city size, I am willing to work in any size community.	NP

Concept: Labor market areas consist of central cities and the surrounding commuting areas. For purposes of convenience they are defined in terms of counties or groups of counties. Where the central city or cities are large, there is usually great industrial diversity and there are many occupational categories. Smaller cities have less diversity and in addition may have certain types of jobs not found in larger cities, such as those associated with agriculture, lumbering, or mining. The city size category is based upon the size of the central city in the labor market area. All jobs are coded for a city size category if they are found anywhere in the labor market area.

CITY SIZE, (cont.)

Concept: (cont.)

Large City -- a labor market area containing a central city of over 250,000. In California these are the Los Angeles-Long Beach area--Los Angeles County; the San Diego area--San Diego County; the San Francisco-Oakland area--San Francisco, Alameda, Contra Costa, San Mateo and Marin counties; the San Jose area--Santa Clara County; and the Sacramento area--Sacramento, Yolo, and El Dorado counties.

Small City -- a labor market area with a city greater than 50,000, but less than 250,000. In California these are the Anaheim-Santa Ana-Garden Grove area--Orange County; the San Bernardino-Riverside-Ontario area--San Bernardino and Riverside counties; Salinas-Monterey area--Monterey County; Oxnard-Ventura area--Ventura County; Santa Barbara area--Santa Barbara County; Modesto area--Stanislaus County; Stockton area--San Joaquin County; Fresno area--Fresno County; Bakersfield area--Kern County; Vallejo-Napa area--Solano and Napa counties; Santa Rosa area--Sonoma County; and the Santa Cruz area--Santa Cruz County.

Small Town-Rural Area--a labor market area located in a county with no city as large as 50,000. Examples include Mendocino County, Shasta County, and Imperial County.

Examples of jobs not found in large metropolitan areas in California:

4166 Farm Workers
4554 Plywood Laborers

Examples of jobs not found in small cities:

4514 Fallers and Buckers
4516 Chokersetters
7856 Flight Attendents

Examples of jobs not found in rural areas:

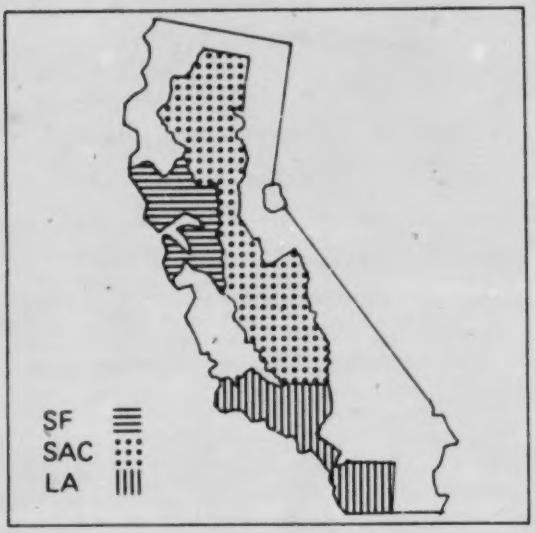
9824 Radio and Television Announcers
1144 Business Executives

21. REGION Where are you willing to work?

Only in the Greater San Francisco Bay Area	SF
Only in the Sacramento-San Joaquin Valley Area	SAC
Only in the Los Angeles-Southern California Coastal Area	LA
Elsewhere in California	OTHER
Anywhere in California	CAL
Anywhere in the U. S.	US

Concept: This question is based on career prospects in different areas in the state. Although some occupations are distributed proportionately with population, others are so localized that they are unlikely careers to pursue in many areas.

The map below reflects the areas represented in the question:



Examples of jobs not found in the Greater San Francisco Bay Area:

4424 Textile Machine Operators

5924 Rubber and Plastics Fabricators

Examples of jobs not found in the Sacramento-San Joaquin Valley Area:

5485 Shipfitters

5914 Petroleum Plant Operators

Examples of jobs not found in the Los Angeles-Southern California area:

4536 Sawmill Chain Offbearers

4554 Plywood Laborers

4 INFORMATION FILES

Those in need of detailed and accurate information which relates career opportunities to educational programs and schools usually cannot locate a single source for this information. Not only is it mostly fragmented and scattered, but the occupational information is seldom prepared for a user's specific locale, written in a manner which can be understood easily, or kept up-to-date. In addition, the best available publications on postsecondary education lack certain information which potential postsecondary educational consumers want, and these publications do little to relate career opportunities to the programs offered in the various educational institutions. Even if the information itself is correct and current, it still should be delivered in an attractive, motivational manner which can be updated easily.

EUREKA is a direct response to these needs. Its information files provide a single, efficient, informational source relating career opportunities and decisions with postsecondary educational opportunities and choices. Its direct-access computer delivery system is motivating to use and permits the user to obtain occupational or educational information in any desired sequence.

This chapter will acquaint you with the content, format, features, and uses of EUREKA's eight information files:

occupational description
cluster description
preparation
cluster preparation
bibliography
visit
programs of study and training
schools

Of all these files, occupational description has proven to be the most popular

and valuable, but at the same time it has stimulated the most questions. You will find answers to the questions most commonly asked about the occupational description file next. Following this catechetical section are explanations and sample printouts of all the information files.

QUESTIONS AND ANSWERS ABOUT THE OCCUPATIONAL DESCRIPTION FILE

What are EUREKA's occupational descriptions?

The occupational descriptions are narrative statements about jobs or closely related groups of jobs. They contain descriptions of job duties, aptitudes required to do the job, the work setting in which the job is performed, and the major types of employers hiring workers in these fields.

Accompanying each occupational description is a labor market statement which provides the latest available information on wages, outlook, and number of persons employed in the occupation in California.

To what extent are the occupational descriptions localized?

Localized files are being developed for occupations in which substantial differences in labor market conditions, such as wages or outlook, exist within California. Three areas for localization of data are currently defined: the San Francisco Bay Area, the Sacramento-San Joaquin Valley Area, and the Los Angeles-Southern California Coastal Area. Within these areas, separate data for standard metropolitan areas, such as San Diego, San Jose, or Fresno, have been entered where available.

Why do the occupations have four-digit numbers?

Each occupational description is identified by a four-digit number for ease of handling by the user and by the computer. The first two digits of the occupational number identify which of the 26 clusters each occupation is classified under. Locksmiths (3192), for example, is in the Mechanical (3100) cluster; Firefighters (9426), in the Protective Service (9400) cluster. For each four-digit occupational number there is a corresponding set of attributes which are used to create QUEST lists.

How do the Occupational descriptions relate to the DOT?

The foundation of each occupational description is the Dictionary of Occupational Titles (DOT). The DOT contains over 20,000 job titles and descriptions and is by far the most comprehensive source of data on job duties and work requirements in the U.S. Further, it is based upon on-site analyses of jobs throughout the country, conducted by eleven Occupational Analysis Field Centers. The results of all this analytical activity include not only the 1300-page DOT with its detailed job descriptions, but

also a data base which provides measures of the worker requirements of all 20,000 DOT jobs for the following items: data-people-things, work fields, general educational development, specific vocational preparation, aptitudes, temperaments, interests, physical demands, working conditions, and career fields. These worker requirement measures are the basis of the QUEST attribute coding.

Why doesn't EUREKA use the full DOT structure, including the 20,000 DOT job titles?

There are several reasons why the DOT structure, in and of itself, is not an appropriate vehicle for providing information for career guidance.

First, there is no indication of the dimensions of the job market for titles in the DOT. For some titles, such as Clerk-Typist (DOT #203.362-010), there are many job opportunities, and further, they are found in virtually every labor market in the country. For others, such as Cigar Inspector (529.687-042), there are just a few jobs which are found only in certain areas.

A second problem is that a very large number of the jobs described in the DOT refer to jobs which can be entered only through a process of in-plant, on-the-job training or through experience and promotion. These jobs, often referred to as internal-market jobs, are not particulary relevant to someone making a career decision since there is no specific career preparation that will predictably lead to such jobs. Consider the petroleum refining industry: There are over a hundred titles of petroleum refining production jobs in the DOT which require skills acquired only on the job and are filled by promotion from the entry job, Petroleum Plant Operator (549.260-010). Since the route to all production jobs in petroleum refining is this entry job, it is the only job relevant to consider for career planning purposes and hence the only one necessary to include in EUREKA.

The classification structure used in EUREKA provides a way to maintain the precision of the DOT data base and yet present it in a way that is manageable and comprehensible to someone exploring career options. In order to preserve the usefulness of the DOT data base, each occupation chosen for inclusion in the EUREKA occupational file is based upon one or more DOT titles.

How does EUREKA choose which occupations to include?

EUREKA occupations cover those occupational fields which provide significant employment within a state or labor market. In California, we defined

"significant employment" to mean that at least 1000 people are currently working in that field, (about 1/100 of 1% of the state's labor force.)

How are employment levels for an occupation determined?

The primary basis for determining the employment level in an occupational area within California has been the publication, California Manpower, which is prepared by the California Employment Development Department. This is the most comprehensive source of data on number of workers in an occupation and rates of growth and decline by occupation.

What other sources of occupational information are used?

EUREKA analysts review the most recent wage and outlook information available in reports from the Employment Development Department, the U.S. Department of Labor, and local public and private sources.

Each occupation is also reviewed by a panel of specialists familiar with that occupation. The panel includes employers, counselors, educators, persons working in the field, professional or trade association members, and licensing agencies.

What does EUREKA have that other sources do not provide?

EUREKA uses the Career Information System (CIS) as a framework for integrating information about the characteristics and requirements of jobs into a comprehensive picture of the world of work. The EUREKA user can make meaningful career decisions based upon a comparison of his or her own self-assessed interests and abilities and this occupational information.

What competencies does EUREKA have to develop this information?

EUREKA's staff includes labor-market analysts who have accumulated years of experience analyzing labor-market data gathered by government agencies and career counselors who have faced the problems of making occupational data relevant to users' needs.

EXPLANATIONS AND SAMPLE PRINTOUTS OF INFORMATION FILES

File Name: OCCUPATIONAL DESCRIPTION

Command: DESC __(occ #)__ (When you want to get a description of job duties, working conditions, hiring requirements, employment prospects, etc. for a certain occupation.)

NOTE: When the user specifies an area in QUEST question 21, DESC will automatically print information for that area. To change areas or to skip being asked for an area if it hasn't already been specified, the user may type the area directly following the occupational number. See sample.

Features:

STATEWIDE INFORMATION

The description for each occupation follows a standard format which incorporates the following topics: Description of Duties, Aptitudes, Work Setting, Hiring Practices, Current Employment, Wages, and Outlook. The first four topics comprise that part of the entire description which is consistent throughout the state.

DESCRIPTION OF DUTIES provides a short summary of the general tasks performed by workers in this occupation. This information has been gathered from a variety of sources and validated by people personally knowledgeable about the career. A list of specialties within the occupation and related EUREKA occupations are also included for most occupations.

APTITUDES lists the abilities and interests required for successful performance on the job. This information is based on field observations by occupational analysts.

WORK SETTING states whether the work is performed indoors or outdoors, the degree of physical exertion involved, exposure to elements and/or potentially dangerous surroundings, and any other information about working conditions that may be pertinent. Types of employers are also included.

HIRING PRACTICES lists requirements such as passing an exam, obtaining a license or completing a training program. The occupational preparation file contains additional training information.

LOCALIZED INFORMATION

The last three topics comprise that part of the occupational description which may vary significantly for different geographical areas. Each occupation is researched to determine what, if any, differences exist between the information in specific areas and statewide information. EUREKA presently

OCCUPATIONAL DESCRIPTION FILE

(sample computer printout)

DESC8127SF
8127 PHYSICAL THERAPISTS

PHYSICAL THERAPISTS TREAT INDIVIDUALS WITH PHYSICAL DISABILITIES TO RELIEVE PAIN AND RESTORE FUNCTION. THEY PLAN AND ADMINISTER TREATMENTS PRESCRIBED BY A PHYSICIAN TO PATIENTS WITH PHYSICAL DISABILITIES RESULTING FROM INJURY, DISEASE, OR SURGERY. THEY ADMINISTER AND INTERPRET TESTS AND MEASURMENTS FOR MUSCLE STRENTH COORDINATION AND RESPIRATORY AND CIRCULATORY EFFECIENCY RESULTS OF THESE TESTS ARE USED TO DEVELOP PROGRAMS FOR TREATMENT. THEY ALSO INSTRUCT PATIENTS IN CARE AND USE OF WHEELCHAIRS, BRACES, CANES, CRUTCHES, AND OTHER DEVICES; AND THEY KEEP RECORDS OF TREATMENT. SPECIALITIES: PHYSICAL THERAPISTS (DOT# 076.121-014); CORRECTIVE THERAPISTS (076.361-010). EUREKA RELATED OCCUPATIONS: OCCUPATIONAL THERAPISTS (SEE DESC 8125), HEALTH THERAPIST (8126).
---APTITUDES: FAIRLY GOOD VERBAL ABILITY TO COMMUNICATE WITH PATIENTS AND MEMBERS OF THEIR MEDICAL TEAM. THERAPISTS NEED EMOTIONAL STABILITY AND MATURITY, AN INTEREST IN SERVING PEOPLE AND PATIENCE AND ABILITY TO WORK TOWARD A LONG RANGE GOAL. STAMINA, RATHER THAN UNUSUAL PHYSICAL STRENGTH, IS AN IMPORTANT HEALTH FACTOR.
---WORK SETTING: INDOOR USING EQUIPMENT SUCH AS PARALLEL BARS, WHEELCHAIRS, WALKERS OR HYDROTHERAPY TANKS TO WORK WITH PATIENTS. THE AVERAGE WORK WEEK IS 40 HOURS; BUT PART-TIME EMPLOYMENT IS COMMON. EMPLOYERS: THE MAJORITY OF PHYSICAL THERAPISTS WORK IN HOSPITALS AND NURSING HOMES; OTHERS WORK IN REHABILITATION CENTERS, PUBLIC HEALTH AGENCIES, SCHOOLS, CLINICS, AND PRIVATE PRACTICE.
---HIRING PRACTICES: PHYSICAL THERAPISTS MUST BE LICENSED BY THE THE STATE BOARD OF MEDICAL QUALITY ASSURANCE. APPLICANTS MUST STATE. APPLICANTS MUST HAVE COMPLETED AN APPROVED PROGRAM. DEGREE PROGRAMS IN PHYSICAL THERAPY ARE AVALIABLE AT 5 CALIFORNIA COLLEGES. IN ADDITION, MANY COMMUNITY COLLEGES AVE PROGRAMS FOR THERAPY ASSISTANTS. (SEE PREP 8127).

---CURRENT EMPLOYMENT: THERE ARE ABOUT 4,300 LICENSED PHYSICAL THERAPISTS IN CALIFORNIA.
---WAGES: ENTRY RATES RANGE FROM $750-$1,000/MONTH. THOSE WITH SEVERAL YEARS EXPERIENCE EARN FROM $1,000-$1,400/MONTH.
---OUTLOOK: GOOD EMPLOYMENT PROSPECTS. SHORTAGES EXIST PRIMARILY IN SMALL TOWNS AND RURAL AREAS. OUTLOOK DEPENDS ON AVAILABILITY OF FUNDS FOR REHABILITATION SERVICES, INCREASED RECOGNITION AND REFERAL OF PHYSICAL THERAPISTS BY PHYSICIANS, CHANGING NATIONAL HEALTH POLICIES AND REPLACEMENT OF THOSE WHO RETIRE OR DIE. DESPITE ENCREASED NUMBERS OF GRADUATES, OPPORTUNITIES ARE EXPECTED TO BE GOOD FOR PHYSICAL THERAPISTS, PARTICULARLY FOR THOSE WHO DESIRE PART-TIME WORK OR WHO ARE WILLING TO RELOCATE.

localizes information for the following three areas of the state:

Area	Code Word
Greater San Francisco Bay Area	SF
Sacramento-San Joaquin Valley Area	SAC
Los Angeles-Southern California Coastal Area	LA

CURRENT EMPLOYMENT lists the number employed in the occupation in the state or, when significant localized information is available, in a particular region of the state.

WAGES provides users with an indication of the salary or wage they can expect to earn in an occupation. Average entry wages are reported (i.e., wages for a person who has no previous experience in the field). This information is localized when it varies from the average statewide entry rate.

OUTLOOK includes the following:

1. The projected employment outlook for that occupation;
2. Factors which will influence that projected outlook; and
3. Current trends which characterize the employment practices of employers who hire persons in the occupation.

Whenever possible, the employment outlook section presents information on a local level. When current, accurate, local employment projections are not available, statewide information is given. In occupations with national labor markets, national data are presented.

Employment outlook refers to the relationship between the number of qualified applicants seeking particular jobs and the number of openings likely to become available. There may be a surplus of applicants, i.e., there are more people seeking jobs than there are openings. There may be a shortage of applicants, i.e., there are more new jobs than persons to fill them. There may be a balance of jobs and applicants, i.e., the number of new jobs expected is about the same as the number of persons seeking these jobs.

You should be aware that substantial numbers of people may be hired each year even in occupations where applicants outnumber openings. A job that matches one's interests and abilities may be the right job even if prospects are limited. The purpose of the outlook section is not to discourage but to present objectively the obstacles the applicant will face.

Suggested Uses:

The description file provides a meaningful and realistic first step in exploring an occupation. Users should be encouraged to examine as many occupational descriptions as they find interesting.

File Name: CLUSTER DESCRIPTION*

Command: DESC (first two digits of occ # followed by 00)

(When you want to see information about a cluster and see a list of all the occupations in that cluster.)

Features:

The standard format of this file consists of a brief description of duties common to occupations within the same cluster, and a list of occupations within the cluster. Before each occupational title is the four-digit occupational code, used in exploring the career further. EUREKA's 260 occupations are divided into 26 clusters.

Suggested Uses:

The cluster description provides users with an opportunity to familiarize themselves with occupations related to their primary areas of interest. This file also introduces users to the cluster concept and idea of occupations sharing related tasks.

```
 DESC81
 8100    HEALTH SERVICE OCCUPATIONS:
HEALTH SERVICE OCCUPATIONS POSSESS A VARIETY OF SKILLS WHICH
THEY USE IN TREATING THE HEALTH & PERSONAL NEEDS OF PATIENTS
AND CLIENTS. YOU CAN LEARN MORE ABOUT THIS CLUSTER BY LOOKING
AT THE DESCRIPTIONS FOR THESE OCCUPATIONS:

  8112  PHYSICIANS
  8113  DENTISTS
  8114  VETERINARIANS
  8115  OPTOMETRISTS
  8116  DIETICIANS
  8122  CHIROPRACTORS
  8117  PHYSICIAN'S ASSISTANT
  8124  PHARMACISTS
  8125  OCCUPATIONAL THERAPIST
  8126  HEALTH THERAPISTS
  8127  PHYSICAL THERAPISTS
  8128  SPEECH PATHOLOGIST/AUDIOGISTS
  8162  REGISTERED NURSES
  8164  LICENSED VOCATIONAL NURSES
  8166  NURSE AIDES AND ORDERLIES
  8168  EMERGENCY MEDICAL TECHNICANS
  8174  DENTAL HYGIENTISTS
  8176  DENTAL ASSISTANTS
  8182  MORTICIANS
  8184  BARBERS
  8186  COSMETOLOGISTS
```

* See User Handbook, p. 14

File Name: PREPARATION

Command: PREP __(occ #)__ (When you want to see how people prepare for an occupation.)

Features:

This file describes how people prepare for work in an occupation. The preparation statement is divided into four sections: Skills, Licensing, Preparation, and Tips.

SKILLS defines the skills, knowledge, or abilities a person should acquire if he or she is interested in this occupation.

LICENSING lists what, if any, are California's licensing requirements for the occupation.

PREPARATION describes the ways people prepare for the occupation. Preparation may include schooling, on-the-job training, or work experience, as well as the length of the training period. The user is also referred to appropriate Program of Study and Training files in the system.

TIPS provides users with constructive suggestions for obtaining employment in the occupation.

Suggested Uses:

This file gives the user a realistic statement of the preparation methods for a career. This information may be helpful in evaluating career options as well as planning education and training programs.

PREPARATION FILE

(sample computer printout)

PREP8127
8127 PHYSICAL THERAPISTS
---SKILLS: KNOWLEDGE OF PRINCIPLES, TECHNIQUES, MATERIALS AND EQUIPMENT USED IN PHYSICAL THERAPY; ABILITY TO ADAPT TREATMENT TO PATIENT'S NEEDS; KNOWLEDGE OF HUMAN GROWTH AND DEVELOPMENT INCLUDING HUMAN ANATOMY AND PHYSIOLOGY; ABILITY TO MAINTAIN RECORDS AND PREPARE REPORTS; KNOWLEDGE OF THE ROLE AND FUNCTION OF OTHER HEALTH PROFESSIONALS AND ABILITY TO MAINTAIN EFFECTIVE WORKING RELATIONSHIPS WITH THEM. THOSE WHO WORK IN OUTLYING AREAS SHOULD HAVE THE ABILITY TO MAKE REHABILITATIVE EQUIPMENT AND CORRECTIVE DEVICES WITH LIMITED MATERIALS AND BE FAMILIAR WITH OTHER COMMUNITY RESOURCES AVAILABLE.
---LICENSING: PHYSICAL THERAPISTS MUST BE LICENSED BY THE STATE BOARD OF MEDICAL QUALITY ASSURANCE. LICENSING REQUIREMENTS INCLUDE:
-COMPLETION OF AN APPROVED PROGRAM OF STUDY
-AGE 18 OR OVER
-BE OF GOOD MORAL CHARACTER
-PASS LICENSING EXAM
LICENSING FEE IS $70 AND MUST BE RENEWED EVERY 2 YEARS ($30). THE BOARD ALSO OFFERS A LICENSE FOR PHYSICAL THERAPY ASSISTANTS. FOR FURTHER INFORMATION WRITE:
STATE BOARD OF MEDICAL QUALITY ASSURANCE
1430 HOWE AVE.
SACRAMENTO, CA 95825
---PREPARATION: PHYSICAL THERAPISTS MUST COMPLETE AN APPROVED PROGRAM OF STUDY IN PHYSICAL THERAPY. BOTH THE 4-YEAR PROGRAM FOR PHYSICAL THERAPISTS AND THE 2-YEAR PROGRAM FOR PHYSICAL THERAPY ASSISTANTS ARE AVAILABLE IN CALIFORNIA. (SEE PROG 374).
---TIPS: A GRADUATE DEGREE, COMBINED WITH SOME CLINICAL EXPERIENCE, INCREASES THE OPPORTUNITIES FOR PEOPLE WHO WANT TEACHING, RESEARCH, AND ADMINISTRATIVE POSITIONS. PERSONS WHO WANT TO DETERMINE WHETHER THEY HAVE THE PERSONAL QUALITIES NEEDED FOR THIS OCCUPATION MIGHT VOLUNTEER FOR SUMMER OR PART-TIME WORK. HIGH SCHOOL COURSES THAT PROVIDE USEFUL BACKGROUND INCLUDE HEALTH, BIOLOGY, SOCIAL SCIENCE, MATHEMATICS, PHYSICS AND PHYSICAL EDUCATION.

File Name: CLUSTER PREPARATION

Command: PREP __ __ (first two digits of occ #)

(When you want to list high school courses that will help in preparing for a field of work (cluster).)

Features:

This file features a list of high school courses which may be found helpful in preparing for a career within a cluster. There is also a short description of duties that are common to occupations within the cluster.

Suggested Uses:

This file is particularly helpful in curriculum planning at the junior and senior high school level. It also has the positive effect of adding relevancy to high school coursework.

```
 PREP81
 8100    HEALTH SERVICE OCCUPATIONS:
PERSONS IN HEALTH SERVICE OCCUPATIONS POSSESS A VARIETY OF
SKILLS WHICH THEY USE IN TREATING THE HEALTH AND PERSONAL
NEEDS OF PATIENTS AND CLIENTS.  CAREER PREPARATION COULD
INCLUDE THE FOLLOWING HIGH SCHOOL SUBJECTS:
     ALGEBRA                      HEALTH EDUCATION
     BIOLOGY                      READING
     CHEMISTRY                    SPEECH
     COMPOSITION
SOME HIGH SCHOOLS OFFER SPECIAL COURSES IN THE HEALTH
OCCUPATIONS CLUSTER.  ON THE OTHER HAND, STUDENTS MAY NEED
TO CONSIDER POST-SECONDARY AND/OR ON-THE-JOB TRAINING.

YOU CAN LEARN MORE BY LOOKING AT THE DESCRIPTIONS FOR THESE
OCCUPATIONS:

   8112  PHYSICIANS                 8176  DENTAL ASSISTANTS
   8113  DENTISTS                   8182  MORTICIANS
   8114  VETERINARIANS              8184  BARBERS
   8115  OPTOMETRISTS               8186  COSMETOLOGISTS
   8116  DIETICIANS
   8117  PHYSICIAN'S ASSISTANTS
   8124  PHARMACISTS
   8125  OCCUPATIONAL THERAPIST
   8126  HEALTH THERAPISTS
   8127  PHYSICAL THERAPISTS
   8128  SPEECH PATHOLOGIST/AUDIOLIST
   8162  REGISTERED NURSES
   8164  LICENSED VOCATIONAL NURSES
   8166  NURSE AIDES AND ORDERLIES
   8168  EMERGENCY MEDICAL TECHNICIANS
   8174  DENTAL HYGIENISTS
```

File Name: BIBLIOGRAPHY

Command: BIB __(occ #)__ (When you want to get a bibliography of occupational books.)

Features:

Bibliography lists publications for further exploration and research. Users are referred to occupational books, pamphlets and other materials which contain information on the occupation. It is, of course, advisable for career reference materials to be easily accessible to the user.

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BIB8127

 8127    PHYSICAL THERAPISTS
RELATED PUBLICATION(S):
'OCCUPATIONAL OUTLOOK HANDBOOK' (1978-79 ED.), PP. 498-502.
'CALIFORNIA OCCUPATIONAL GUIDE' (NO. 117), 'PHYSICAL
THERAPIST'; (NO. 415), 'PHYSICAL THERAPY AIDE'.
IF YOU WANT TO ORDER THE OCCUPATIONAL OUTLOOK HANDBOOK, SEND
$7.00 TO SUPT. OF DOCUMENTS, U.S. DEPT. OF LABOR, BOX 36017,
SAN FRANCISCO,CA. 97102.  ASK FOR BULLETIN #1875
```

File Name: VISIT

Command: VISIT __(occ #)__ __(area code)__ (When you want to get the names of people for personal discussion about their occupations. This feature is not available in all areas.)

Features:

The primary function of the VISIT file is to provide personal contact between the user and a person who is working in a particular occupation, thus giving the user an opportunity for discussion of occupations and possible observation of work sites.

"Visits" may take the form of ½- to 1-hour individual interviews or 2- to 3-hour work site observation. Some VISIT contact people have also volunteered to speak to classes or to lead field trips.

VISIT files are presently available for selected areas only. The information is developed and updated by community resource staff members. Should you wish to participate in the development of a VISIT file for your area, please call or write EUREKA's VISIT file coordinator for details.

```
?VISIT 8127

8127   PHYSICAL THERAPISTS

INSTRUCTIONS:  TO ARRANGE FOR A PERSONAL INTERVIEW WITH ONE OF
THE PHYSICAL THERAPISTS ON THE VISIT LIST, FILL OUT A VISIT
REQUEST FORM AVAILABLE FROM YOUR COUNSELOR OR EUREKA COORDINATOR.
DO NOT CONTACT THE PERSON YOURSELF.  NOTE:  THIS IS NOT AN INTERVIEW
FOR A JOB.

NAME:              MS. JANE DOE
POSITION:          PHYSICAL THERAPIST
INSTITUTION:       ALLSTATE GENERAL HOSPITAL
ADDRESS:           1234 MAIN STREET, OAKMONT, CA  94675


NAME:              JOHN SMITH
POSITION:          CHIEF PHYSICAL THERAPIST
INSTITUTION:       GREEN HILLS CONVALESCENT HOME
ADDRESS:           555 SUNSET DRIVE, RICHVIEW, CA  94333
```

File Name: PROGRAMS OF STUDY AND TRAINING

Command: PROG (prog #) (When you want to get a list of courses, degrees, and schools for a program of study and training.)

Features:

The PROGRAM File provides information on 130 kinds of education and training programs in the state. Each program file is divided into two parts: a description of the program and a list of schools offering the program. The user may choose to see the description, the list, or both.

DESCRIPTION contains a statement about the program's length, skills necessary to be successful in the program, coursework to be completed, related training programs, and EUREKA-related occupations.

Suggested Uses:

Acquaints the user with the scope of work involved in completing a course of study and where that course of study may lead.

```
 PROG 374
374    PHYSICAL THERAPY

DO YOU WANT TO SEE A DESCRIPTION OF THE PROGRAM?  (TYPE IN: YES OR NO)
?YES

     ONLY SELECTED SCHOOLS OFFER THE SPECIALIZED TRAINING
NECESSARY TO PREPARE PEOPLE TO BE CERTIFIED AS PHYSICAL
THERAPISTS (ALSO SEE DESC 8126). HOWEVER, MANY 4-YR SCHOOLS
DO PROVIDE FROM 1 TO 3 YEARS OF AN APPROPRIATE SCIENCE CUR-
RICULUM AS A PRE-PROFESSIONAL TRAINING PROGRAM WHICH
MAY THEN BE TRANSFERRED TO A SCHOOL THAT OFFERS A PHYSICAL
THERAPY DEGREE.  SOME SCHOOLS OFFER TRAINING WITHIN THEIR
P.E. CURRICULUM.  HIGH SCHOOL STUDENTS SHOULD COMPLETE A
STRONG COLLEGE PREP PROGRAM WITH EMPHASIS IN SCIENCE-MATH
BEFORE PLANNING TO ENTER A PRE-PROFESSIONAL PHYSICAL THERAPY
PROGRAM.  COMMUNITY COLLEGES OFFER 2-YEAR ASSOCIATE DEGREES
INTENDING TO PREPARE PHYSICAL THERAPY ASSISTANTS WHO ASSIST
THE PHYSICAL THERAPISTS IN PATIENT TREATMENT PROGRAMS. COM-
PLETION OF THE 2-YEAR PROGRAM IS A PRE-REQUISITE FOR TAKING
A LICENSING EXAM AS A PHYSICAL THERAPY ASSISTANT.
     COURSEWORK FOR CERTIFIED PHYSICAL THERAPIST: INCLUDES
SCIENCE COURSES SUCH AS NEUROANATOMY AND NEUROPHYSIOLOGY,
ALSO SPECIALIZED COURSES SUCH AS BIOMECHANICS OF MOTION AND
HUMAN GROWTH AND DEVELOPMENT.  BESIDES RECEIVING CLASSROOM
INSTRUCTION, STUDENTS GET SUPERVISED PRACTICAL EXPERIENCE IN
AN INTERNSHIP ADMINISTERING PHYSICAL THERAPY TO PATIENTS IN
A HOSPITAL OR TREATMENT CENTER.
```

PROG 374 PHYSICAL THERAPY (cont.)

```
   COURSEWORK FOR PHYSICAL THERAPY ASSISTANT: INCLUDES
PHYSICAL THERAPY TECHNICAL COURSES, COURSES IN THE BIOLOGI-
CAL, PHYSICAL & SOCIAL SCIENCES, ENGLISH & COMMUNICATION,
P.E. & INCLUDES CLINICAL EXPERIENCE.  INSTRUCTION INCLUDES
LECTURE, SCIENTIFIC READING & TECHNICAL REPORT WRITING &
PRACTICAL EXPERIENCE WITH PHYSICAL THERAPY TECHNIQUES.  CON-
SULT SCHOOL CATALOGS FOR MORE COMPLETE DESCRIPTIONS OF CUR-
RICULUM.
     GRADUATES OF AN ASSOCIATE DEGREE PROGRAM IN THIS AREA
MAY ALSO GO ON TO A SCHOOL OFFERING A BACHELOR'S DEGREE IN
PHYSICAL THERAPY & NORMALLY COMPLETE BACHELOR'S DEGREE RE-
QUIREMENTS IN 2 YEARS.
     RELATED PROGRAMS: 367 OCCUPATIONAL THERAPY;  235 PHYS-
ICAL EDUCATION;  237 SPECIAL EDUCATION.

DO YOU WANT A LIST OF SCHOOLS? (TYPE IN 'YES' OR 'NO').
?NO
```

SCHOOLS lists schools offering programs in a particular field. The five-digit number preceding the school name is the EUREKA code used to obtain detailed and comparative information through the School File. Abbreviations used in this section are as follows:

*	Means an option or concentration within another degree program
C	Certificate
BA	Bachelor of Arts
BS	Bachelor of Science
BVE	Bachelor of Vocational Education
CRED	Credential
MA	Master of Arts
MS	Master of Science
MBA	Master of Business Administration
MPA	Master of Public Administration
PHD	Doctor of Philosophy
MD	Doctor of Medicine
DDS	Doctor of Dental Surgery
DVM	Doctor of Veterinary Medicine

The schools are arranged in the same sequence as they appear in the User Handbook, beginning with the Universities of California and ending with the community colleges. To skip over, say, the California State Colleges and Universities, users may punch the Return Key during the pause which follows each heading.

File Name: SCHOOLS

Command: SCH _____, _____, _____ (1, 2, or 3 five-digit school codes)

(When you want to compare the services and costs of schools.)

Features:

The School File permits users to obtain useful information on over 210 postsecondary educational institutions. Information is available on 33 topics, including general information, enrollment, admission and graduation requirements, special programs offered, housing and financial information, and student services. Information on as many as three schools may be printed at one time and compared in side-by-side columns.

Suggested Uses:

To compare basic information on schools in which the users may be interested.

```
 SCH21007,21519,21961
WHAT DO YOU WANT TO KNOW ABOUT THE SCHOOLS?
    TYPE IN THE SCHOOL TOPICS.  EXAMPLE: 1-5, 21, 71, 85
    SCHOOL TOPIC CODES ARE ON PAGE 23 OF YOUR HANDBOOK.
?1,73,75-79,80,85-89,101

                          UNIVERSITY OF   CALIF. STATE    SIERRA COLLEGE
                          CALIFORNIA      UNIVERSITY      5000 ROCKLIN
                          SAN FRANCISCO   NORTHRIDGE      ROAD
                          SAN FRANCISCO   18111 NORDHOFF  ROCKLIN, CAL.
                          CA. 94143       STREET          95677
                                          NORTHRIDGE, CA.
                                          93124

01 GENERAL INFORMATION
TYPE OF SCHOOL            2-YEAR PUBLIC   4-YEAR PUBLIC   COMMUNITY
                          UNIVERSITY-COED UNIVERSITY-COED COLLEGE
                          UPPER DIVISION
                          HEALTH SCI ONLY
GRADUATE DEGREES          HEALTH SCI ONLY YES-EXTENSIVE   NO
SCHEDULE OF CLASSES       QUARTER         SEMESTER SYSTEM SEMESTER
CORRESPONDENCE COURSES    NO              NO              NO
UNDERGRAD SUMMER          FULL QUARTER &
  CURRICULUM              2 6-WEEK SUM.   TWO SIX-WEEK    ONE 6-WK.
                          SESSIONS.       SESSIONS        SESSION
LOCATION OF SCHOOL        SAN FRANCISCO   NORTHRIDGE      ROCKLIN, CAL.
POPULATION OF NEAREST
  CITY OR TOWN            700,000         3,000,000       3,500
CAMPUS TO CITY CENTER     20 MINUTES      26 MILES        2 MILES
MILES TO SAN FRANCISCO                                    SACRAMENTO-
OR NEAREST LARGE CITY                     26 MILES TO LA  15 MILES
```

SCHOOL TOPICS: Information is available in the School File on 33 topics which are listed in the User Handbook. Additional school information is available under each topic heading. The following printout shows the information covered in each topic.

GENERAL INFORMATION

01 GENERAL INFORMATION
- TYPE OF SCHOOL
- GRADUATE DEGREES
- SCHEDULE OF CLASSES
- CORRESPONDENCE COURSES
- UNDERGRAD SUMMER CURRICULUM
- LOCATION OF SCHOOL
- POPULATION OF NEAREST CITY OR TOWN
- CAMPUS TO CITY CENTER
- MILES TO SAN FRANCISCO OR NEAREST LARGE CITY

02 ENROLLMENT INFORMATION
- TOTAL (EXCL ADULT ED)
- WOMEN
- MEN
- FULL-TIME UNDERGRADS.
- PART-TIME UNDERGRADS.
- OUT-OF-STATE STUDENTS
- NEW STUDENTS (FROSH)
- NEW WOMEN
- NEW MEN
- TRANSFERS
- FOREIGN

03 MINORITY ENROLLMENT
- TOTAL AMERICAN MINORITY
- AFRO-AMERICAN
- NATIVE AMERICAN
- ASIAN-AMERICAN
- LATIN AMERICAN-CHICANO
- OTHER

05 FURTHER INFORMATION
- CONTACT PERSON
- SCHOOL VISITS
- SCHOOL VISIT CONTACT
- OVERNIGHT LODGING

71 ALTERNATE CREDIT
- CONTACT FOR MORE INFO
- ADVANCED PLACEMENT
- CLEP
- CHALLENGE FOR COURSE CREDIT

72 CLASS SIZE-FRESHMEN
- LECTURE
- LABORATORY
- DISCUSSION
- LOWER DIV COURSES TAUGHT BY GRAD ASST'S

73 SCHOOL WIDE GRAD. REQUIREMENTS

74 PASS/FAIL GRADING

PROGRAMS OF STUDY

65 FOREIGN STUDY

66 HONORS PROGRAM
- CONTACT FOR MORE INFO

67 ROTC

68 ETHNIC STUDIES

69 WOMEN'S STUDIES
- CONTACT FOR MORE INFO

ADMISSIONS

75 FRESHMEN ADMISSION ROUTES
- EDUCATION REQUIRED
- H.S. GPA REQUIRED
- OTHER ADMISSION ROUTES
- REQUIRED TESTS
- PERSONAL INTERVIEW
- H.S. COURSES REQUIRED OR RECOMMENDED
- ADMISSION SELECTIVITY
- DROP-OUT RATE (FROSH) SEPT-JUNE

76 TRANSFER ADMISSION REQUIREMENTS

77 ADMISSION APPLICATION
- PROCEDURES
- ITEMS TO SUBMIT
- APPLICATION FORM
- TRANSCRIPT
- APPLICATION FEE
- PERSONAL RECOMMENDATIONS
- DEADLINE

78 SPECIAL ADMISSION-MINORITY STUDENTS

79 SPECIAL ADMISSION-ADULTS

HOUSING

80 DORMITORIES
COST RANGE-DOUBLE ROOM
DORMS ARE REQUIRED FOR
% FROSH WOMEN IN DORMS
% FROSH MEN IN DORMS
ADDRESS FOR HOUSING APPLICATION
APPLICATION DEADLINE
APPLICATION DEPOSIT

81 GREEK HOUSING
SORORITY/FRATERNITY
COST:ACADEMIC YEAR
HRS. OF WORK EXPECTED

83 OFF-CAMPUS HOUSING
CAMPUS AREA:
AVAILABILITY
RENT RANGE/MONTH
OTHER AREAS:
AVAILABILITY
RENT RANGE/MONTH

COST AND FINANCIAL AID

85 STUDENT COSTS
TUITION AND FEES
BOARD,ROOM,EXPENSES
BOOKS & SUPPLIES
TOTAL COSTS

88 AID AVAILABLE
BASIC ED OPPORTUNITY GRANTS (BEOG)
APPLY DIRECTLY TO THE U.S. OFFICE OF EDUC.GRANT MAY BE USED AT ANY ACCREDITED INSTITUTION. SEE YOUR SCHOOL COUNSELOR FOR FORMS.)
SUPPLEMENTARY ED. OPP. GRANTS (SEOG)
CALIF. SCHOLARSHIP COMMISSION TUITION GRANTS APPLY TO COMM. SEE YOUR COUNSELOR.)
OTHER GRANTS
NATIONAL DIRECT LOANS (NDSL)
GUARANTEED STUDENT LOANS (GSL)
(APPLY DIRECTLY TO YOUR BANK. GET FORMS FROM THE SCHOOL YOU PLAN TO ATTEND.)
OTHER LOANS
FINANCIAL AID JOBS
SCHOLARSHIPS

SERVICES

89 AID APP PROCEDURES
ITEMS TO SUBMIT
PARENTS/STUDENT'S CONFIDENTIAL STATEMENT
-PREFERRED DATE
-ABSOLUTE DEADLINE
CALIF. STATE SCHOLARSHIP COMM. APP:
-PREFERRED DATE
-ABSOLUTE DEADLINE
SCHOOL FINANCIAL AID APPLICATION:
-PREFERRED DATE
-ABSOLUTE DEADLINE
BASIC EDUC. OPPORTUNITY GRANT
(OBTAIN BEOG APPLICATION FROM YOUR SCHOOL COUNSELOR. STUDENTS NOTIFIED OF GRANT AWARD BY GOVT.)
OTHER
PREFERRED & ABSOLUTE DEADLINES:MAILING APPLICATION BY PREFERRED DATE GIVES YOU PRIORITY STATUS FINANCIAL AID.)

90 APPLICANTS RECEIVING AID
% FULL TIME FROSH
% OTHER FULL-TIME UNDERGRADS
EXAMPLE OF AID FOR TOTAL NEED STUDENT
EXAMPLE OF AID FOR STUDENT NEEDING 1/2
EXAMPLE OF AID FOR STUDENT NEEDING 1/4
('NEED' AS DEFINED FOR FINANCIAL AID USUALLY RESULTS FROM A COMPLEX FORMULA APPLIED TO AN INDIVIDUAL'S SITUATION THE FORMULA CONSIDERS FAMILY AND STUDENT INCOME,FAMILY SIZE,UNUSUAL EXPENSES, & COST AT THE SPECFIC SCHOOL THE STUDENT SELECTS.)

91 PART-TIME JOBS
LOCATION OF MOST JOBS
AVAILABILITY OF JOBS
WAGE RATE PER HOUR

SERVICES

92 SERVICES FOR ALL UNDER-GRADS:
- ACADEMIC ADVISING
- COUNSELING
- PLACEMENT
- FIN AID COUNSELING
- ORIENTATION
- READING & STUDY SKILLS
- REMEDIAL INSTRUCTION
- TUTORING

93 SPECIAL STUDENT SERVICES
- ATHELETES-WRITE
- HANDICAPPED-WRITE
- MINORITIES-WRITE
- OLDER STUDENTS-WRITE
- VETERANS-WRITE
- OTHER

101 SCHOOL HEALTH SERVICES

102 DAY CARE CENTER LOCATION

103 LIBRARY AVAILABLE
- SCHOOL
- TOWN

104 LOCAL BUS SERVICE COST

105 STUDENT PARKING
- AVAILABLE
- COST

5 USING EUREKA

Once you are familiar with EUREKA's organization, components, concepts, sources of data, computer commands, and hardware, you are ready to put the system to good use with students or clients. But certain problems invariably arise as you begin incorporating EUREKA into your counseling or career planning program, problems such as terminal location, scheduling one terminal for 2000 users, publicizing the system, and so forth.

This chapter includes suggestions to assist you in solving these problems. Remember, though, that EUREKA is used in a wide variety of settings, from junior high schools to universities to ex-offender outreach projects, and as a consequence not every suggestion applies to your situation. Hopefully some will.

LOCATING THE TERMINAL

Most institutions using EUREKA must necessarily compromise on the location of the terminal because of space and supervision constraints. Consider these points while you are compromising on the location:

1. Users should have easy access to the terminal for as many hours during the day and evening as possible. If students or clients can see the terminal being used and observe that the experience is enjoyable and valuable, demand for the system will increase.

2. Someone should be available to assist users at the terminal. A few simple instructions will usually suffice to orient a newcomer to the key computer code words, but it's a good idea to have a fully trained person nearby at all times to assist when questions arise. Paraprofessionals, parents, secretaries, and fellow students or clients can be trained to

perform orientation and troubleshooting duties in addition to other work. (See Appendix for training aids). They may also be helpful in providing pointers to lead users to information they might otherwise overlook or misinterpret.

3. The terminal should be near commonly used career resources so the user may conveniently search through other kinds of career information before or after using EUREKA.

4. The terminal should be close to the counseling area so the counselor may review the printout with the user while the EUREKA experience is still fresh in mind.

Most EUREKA terminals are located in one fixed place, an arrangement which helps to establish awareness and usage among those the system is expected to serve. Here are some fixed locations which have proven to be successful:

Schools--counseling office, library, career center, media center, cafeteria, study hall, lobby, and mezzanine

Colleges--placement office, student activity center, counseling office, library, information desk, and store-front office

Agencies and Programs--counseling office, waiting room and information desk

In some cases, however, where there is no ideal fixed location to be found, consider using a portable terminal which provides access to the system over any standard telephone. Such an arrangement provides the flexibility of accommodating users wherever they are, even in neighborhood centers or private homes.

Don't forget that wherever the terminal is located there must be an electrical power supply available, as well as a provision for a telephone line or a computer cable to connect the terminal to the computer.

SCHEDULING

Because EUREKA is used interactively (keyboard entry) at a computer terminal rather than in a batch mode (card or form entry), one terminal serves only one user at a time. This presents a challenging scheduling problem when the terminal must serve 2000 people, a scheduling problem that requires forethought and planning. You may wish to provide open access on a "drop-in" basis but with heavy contention for the terminal, you just can't.

Consider, though, that with the half-hour sessions which are adequate for most newcomers who have prepared to use the system, you can conveniently schedule fourteen people per seven-hour day, seventy per week, even if they are all newcomers. Quarter-hour time blocks will usually suffice the second and third times around. To set up the schedule, divide the school or work day into 15-minute segments and allow people to sign up for one to four consecutive segments, depending upon individual information needs. If you wish, reserve several hours each day for unscheduled "drop-in" use for curious newcomers and for previous users with subsequent questions.

Many schools and social agencies use EUREKA in conjunction with group counseling, workshops, and classroom activities. This group use efficiently dispenses with the preliminary explanation and discussion of EUREKA, but the terminal will still serve only one person at a time, and it must be scheduled. Since most group activities are planned some time ahead, EUREKA resources should be reserved ahead, preferable at least a week in advance. This advance notice provides just enough time for communication and coordination among counselors and teachers in the necessary scheduling.

In settings where individual students or clients are relatively free to use EUREKA pretty much whenever they choose, periodic jams will still occur. To minimize these jams post sign-up sheets next to the computer terminal, and you will facilitate guaranteed usage in a relaxed atmosphere free from other anxious users.

GUIDING USERS THROUGH

EUREKA is programmed to ask, "What next?" periodically, and if the user isn't familiar with what the choices are, the question will only lead to frustration and confusion while the user wastes time at the terminal pondering what to do next. You, the counselor or instructor, can help your students or clients use EUREKA most effectively by first determining their career awareness levels and then assisting them in determining which files are most appropriate and relevant for their needs.

Although EUREKA is nonsequential, use of the various components tends to follow certain sequences, depending mostly upon age, maturity, education, and career awareness. Older users, for example, usually show more interest in employment outlook and earnings data in the occupational description files, while younger users (at the exploratory stage) may look with more interest at the

aptitudes and interests associated with an occupational description.

For junior high students still in the exploratory stage of career development,

QUEST-----> DESC (OCC #) -----> PREP (CLUSTER #)

may be the most appropriate pattern.

A secondary student or anyone else who is totally undecided about a career might follow this typical pattern:

QUEST-----> DESC (OCC #) -----> PREP (OCC #) ----->PROG -----> SCH

College, university, and some high school students seem to find the PROG files most helpful. Many students know the subjects they like, or are majoring in a field they like but lack information about specific jobs related to these fields. The PROG files list both related jobs and related programs. For these students the pattern might look like this:

PROG -----> DESC (CLUSTER #) -----> DESC (OCC #) -----> PREP (OCC #)

Initially, QUEST is used the most extensively of all the components, probably because of its novelty. Even students and adults who have already made career choices will use QUEST to validate, clarify, or reinforce their self-perceptions and career choices. Some skeptics will even use it to test the system.

The occupational files are used extensively by students and clients who have made tentative or firm career choices, again to validate their choices and/or their perceptions of the occupations they have chosen.

As counselors and instructors, you will find that your own thorough exploration of the EUREKA files, plus your knowledge of your students or clients, their needs, abilities and aspirations, will enable you to guide them in the most effective use of the system, as well as keying EUREKA in with the other career resources you have available.

PREPARING USERS FOR THE COMPUTER EXPERIENCE

Because most EUREKA users have never communicated directly with a computer before, they will likely feel some anxiety as they anticipate this new experience. You might want to allay their anxieties with a short explanation of what the computer is and of what the EUREKA computer program can and cannot do.

The computer, you might tell them is not a god or a genie. It is just a machine which has been loaded with information and has been programmed to respond

quickly to their commands. It is programmed by people to serve people, and it always responds in the same way to the same commands no matter who's using it. The "HELLO" command, for example, will always send the computer to the very beginning of the program, and it will always print out "HELLO, please enter your name, then punch the 'Return' key." It does not have a mind of its own, though it may seem to be pretty clever sometimes, and there is no person at the other end of the line typing responses to the user. The cleverness and the personal touches were consciously programmed into the system to make it more interesting to use.

You might also want to tell them that the computer itself is not the machine which the user touches. That machine is the computer terminal. Its purpose is to relay information from the user to the computer and vice versa. The computer is some distance away (you could tell them exactly where it is), anywhere from a few feet to hundreds of miles (the distance is limited only by the charge for the telephone line). The computer they are using is one of about 30 different computers in California which are programmed to run EUREKA, none of which is used for compiling personal information on the user. In fact, as soon as the user types "STOP" or "HELLO" while using EUREKA, the computer erases all personal information on the user from its memory.

The EUREKA computer program, you might want to say, contains no information about users at all until users reveal their names and give answers to the various QUEST questions. That's the only personal information it can store. EUREKA cannot tell whether users are male or female, young or old, Chinese or Italian, because it is not programmed to ask those questions. That information, for one reason or another, is irrelevant to EUREKA. By using the personal information it obtains through QUEST, however, it can match each user with those occupations which would seem suitable. Yet it does not make any predictions about the user and those occupations, nor does it dictate anything to the user regarding one or more of those occupations. It does not measure or test the user either. It does contain the latest information about occupations but nothing about job openings. It does have accurate information about programs of study and training and about postsecondary schools, but it cannot tell the user which program or school would best serve that user's needs or which school has the best chemistry department. It does not counsel; it does not advise. You could say that EUREKA provides the latest and most localized information available to enable the user to make informed decisions.

With such a matter-of fact introduction to EUREKA, you should be able to

dispel the romantic or mystical notions users might have about what the system can do for them and thereby help them to approach the whole experience realistically.

ASSISTING THE USER AT THE TERMINAL

The user need not be assisted at the terminal by a professional person, but someone knowledgeable about EUREKA should be available to assist. (See Appendix for training aids).

Whoever is assisting, parent, paraprofessional, student, secretary, teacher, counselor, or fellow client, should allow the user to interact freely with the system as much as possible and should refrain from hovering over the user constantly. The assistant should have each user type his or her own responses even if the typing is one-fingered hunting-and-pecking. Using EUREKA then becomes the unique personal experience that it should be.

When the user arrives, the assistant should check to make sure that this particular user is scheduled and is prepared to use the terminal and should make sure that the terminal is logged into the EUREKA program. Next, the assistant should direct the user to the chair at the terminal and instruct the user to type his or her name as requested by the program. That done, the user may sit waiting for something to happen. It won't. The machine will wait patiently until the user presses the "Return" key to signal the end of the message. The computer has no other way of knowing when the user has completed a response. Therefore, the assistant should say something about the "Return" key when giving the initial instructions and should keep an ear open for any other delays caused by the user's having forgotten to press the "Return" key.

At this point the assistant may need to explain the computer message about beginning with QUEST or INFO, but from then on the user should be able to proceed pretty much alone unless there are questions about an unusually short or lengthy QUEST list or about a QUEST list that doesn't contain the occupation(s) the user is currently considering.

USING EUREKA IN COUNSELING

The counselor who uses EUREKA in the career decision-making and counseling process soon learns that though EUREKA is an indispensable part of the information gathering step of that process, it is only tangentially involved with the other three steps: self-assessment, integration of information, and development of a plan of action. Those steps involve counseling, and EUREKA does not counsel. EUREKA is not programmed to simulate a counseling interview. It cannot replace counselors. But it is designed to be a part of counseling and guidance activities. As such, it can--

1. Motivate students and clients to think about their own preferences and relate those preferences to the world of work;
2. Increase the user's knowledge of occupations and information about certain occupations;
3. Provide students with information that they want to keep for future reference;
4. Save the counselor's time by eliminating laborious research;
5. Increase the likelihood of using more reliable occupational information in counseling; and
6. Introduce more order into the career decision-making and counseling process. (QUEST's twenty-one items provide a useful structure for the initial counseling interview.)

The counselor who integrates EUREKA into career counseling will find that EUREKA makes the entire process more efficient and more effective.

PUBLICIZING EUREKA

You don't have to be a P. T. Barnum to get people to use EUREKA, but you do need to let people know the system is available before they can possibly use it. The amount of use people make of EUREKA is closely related to how well the system is publicized both in house and throughout the community. Community familiarity with the system will encourage use and will contribute to a base of strong support for all of your career education activities.

Here are some suggestions for publicizing EUREKA:

1. Locate the terminal in a conspicuous place. Spectators become users. A computer terminal placed in the waiting room of an employment-related program, for example, can turn idle time into constructive career exploration.
2. Hang EUREKA posters where they'll stimulate curiousity about the system. One set of five posters is available without charge for every EUREKA terminal. Obtain yours through your user services specialist.
3. Recruit a budding reporter to write an article about the system for the school newspaper or house organ.
4. Encourage local media to do on-the-spot coverage of students or clients using the system. The computer terminal is intriguing to viewers and readers; consequently it is interesting to the media.
5. Demonstrate the system at a meeting of the PTA or a local service club.
6. Make the system available to the community through adult schools or by taking a terminal directly to shopping centers, fairs, and other public gathering places.
7. Include EUREKA in orientation activities associated with registration.
8. Display products manufactured locally, and relate the occupations involved to job descriptions from the occupational files.

TROUBLESHOOTING

Although EUREKA is eminently reliable and easy to use, certain problems may arise that require special attention. These problems normally fall into two categories:

1. Computer or Terminal Problem

   If you are having difficulty logging in, check your log-in instructions carefully and try again. If the computer does not respond, call your contact person at the computing center to see whether the computer is up or down (working or not). If the problem is with your terminal, arrange to have it repaired. By all means, encourage users to be patient when the system becomes inoperative. Assure them that the malfunction is being corrected and that they will be rescheduled to use the system later.

2. Information or Program Error

   EUREKA's computer programs are tested before they are released for use and information updates are carefully proofed, but errors still somehow sneak through. If you see or hear of a problem in the programs or information files, contact us by telephone or fill out the EUREKA suggestion form which is available from your user services representative, and send it to us along with a printout showing the problem. Our staff will then locate and correct the error, and the correction will be reflected in the next updated computer tape sent to your computer center.

Sample EUREKA Suggestion Form:

EUREKA SUGGESTION FORM

Suggested By: _____

Title: _____

Address: _____

Phone #: _____

Date: _____

For Office Use Only

Referred to: _____

Date: _____

Responded to _____

Date: _____

SUGGESTIONS: _____

NOTE: Please include the computer printout if you believe EUREKA is not working correctly.

APPENDICIES

STANDARDS FOR USE OF

EUREKA, THE CALIFORNIA CAREER INFORMATION SYSTEM

EUREKA, The California Career Information System, has the responsibility for providing a practical means of direct access to current labor market and educational information in forms which are meaningful to individual students and clients and for encouraging integration of such information into schools and social agencies.

The "Standards" are intended to help user schools and agencies understand the System and to plan uses that will complement their other activities.

The purpose of EUREKA, The California Career Information System, as the name implies, is to make occupational and educational information more accessible for career exploration. To achieve this end, EUREKA:

--uses a delivery system that can be operated by inexperienced students and other individuals. Anyone who can follow a simple set of instructions can operate the system.

--updates information immediately as new or revised data becomes available.

--provides in-service training to coordinators in sponsoring agencies.

--establishes a statewide cooperative of users to reduce costs and insure quality information to individual schools and agencies.

The delivery system consists of several semi-independent components which have a certain built-in flexibility that is adaptable to different user needs and different institutional resources. The basic components are these:

QUEST: Helps users identify occupations to explore and helps them locate appropriate types of information about occupations.

DESCRIPTION: Summarizes each of the occupations in the system.

PREPARATION: Describes ways to prepare for occupations.

PROGRAMS OF STUDY AND TRAINING: Describes various types of educational programs, including Regional Occupational Programs, and lists programs in postsecondary education institutions.

SCHOOLS: Presents comparable data about services and costs of two- and four-year postsecondary educational institutions.

VISITS: Gives names of people to contact for personal discussion about their occupations (available only in areas with local sponsors).

The System has been systematically tested and is now in widespread use in educational institutions and social agencies. Among other things, these tests and operating experience indicate certain rules for effective use of the system.

Rules for System Use

1. The following table indicates ways in which System components can be used to meet particular needs. Prospective user institutions should analyze their needs to determine which purposes they want the System to serve.

USES OF EUREKA COMPONENTS

TYPE OF USE	Principal Component	Other Required Components	Optional Additional Components
Identification of Occupations for Exploration	QUEST	DESCRIPTIONS BIBLIOGRAPHY PREPARATION	VISITS
Introduction to Occupations	DESCRIPTIONS	BIBLIOGRAPHY PREPARATION	VISITS
Introduction to Educational & Training Opportunities	PROGRAMS	SCHOOLS PREPARATION DESCRIPTIONS	VISITS BIBLIOGRAPHY
Counselor's Reference to Selected Career Materials	BIBLIOGRAPHY		DESCRIPTIONS PROGRAMS SCHOOLS
Postsecondary School Information	SCHOOLS		PROGRAMS

The requirements listed in the preceding table are based on experience which has shown, for instance, that the QUEST questionnaire and list of occupational titles should not be used by itself. The questionnaire contains several pertinent occupation selection criteria, but other information, for instance, job opportunities and licensing requirements, is essential to a sound occupational choice. Users must have access to and be encouraged to use some additional material--descriptions, books, visits, etc.--to get information about the occupations they want to explore. Any institution using the QUEST part of the System must plan to use at least the DESCRIPTIONS, BIBLIOGRAPHY, and PREPARATION statements.

2. Batch processing of the QUEST questionnaire, whereby students receive only a printout of their QUEST list without an opportunity to make a CHANGE, inquire WHY NOT, and immediately retrieve descriptive information about the occupations, is not authorized. A school or agency that desires to use this process should obtain prior authorization from the EUREKA Director of User Services.

3. Institutions should incorporate the System into ongoing courses and counseling practice, wherever appropriate and feasible.

It is advantageous, though not required, that they also make the System available for independent student/client use. Experience has proved that the System receives effective use when it is open to independent client/student usage, but its resources should also be integrated into ongoing instructional and counseling programs. The publication Inside EUREKA is available to aid in this process.

4. In-service training of staff is a prerequisite to use of the System. Effective use of the System requires an understanding of the following: System components, sources and use of information, mechanics of System use, and discussion of System applications within the particular setting. Staff who will use or be responsible for the use of the System in individual schools and agency offices must attend a training program which has been approved by EUREKA.

5. Each user institution should designate one person as the coordinator for the institution. This will provide a contact point for communication between the institution and the EUREKA staff.

6. Current local, regional, and national occupational and educational information is at the heart of the System. Providing inaccurate or outdated information is a serious misuse of the System and a disservice to students. User schools and agencies must support an adequate program of information maintenance by helping to pay the information development costs of EUREKA, which operates the information maintenance program for the System. (Design of the System was financed by various grants, so user agencies are not charged for any of the initial developmental costs. However, operating costs must be borne by user institutions.) Costs include the following:

a. appropriate printed materials (user handbooks, implementation books, etc.)

b. share of updating costs (continuous information maintenance and system modifications) and distribution of updates.

c. agency staff training and program evaluation

In addition, there are some costs associated with the delivery device:

a. Terminal rental or purchase

b. Terminal maintenance

c. Terminal paper

d. Computer rental or purchase or computer access charge

e. Telephone line and hookup (if required)

7. EUREKA materials are copyrighted and remain the property of the California and/or Oregon Career Information Systems and/or the National Association of Career Information System. They may be duplicated only with the written approval of the Director.

8. User agencies must provide adequate delivery devices to serve their clientele. Experience indicates that one 10 character-per-second (CPS) terminal per 1200 users and one 30 CPS terminal per 2000 users are optimum.

9. The System is still being tested and modified, and new applications may be tested. Experimentation is encouraged, provided it is conducted with evaluation and with approval by EUREKA staff. However, the above requirements have proven to be essential, and any institution using the System must observe these requirements unless other arrangements are made in advance. Unauthorized departure from these standards will be viewed as a breach of the agreement and will result in termination of System availability.

Adopted 10/20/77
EUREKA, The California Career Information System

EUREKA, The California Career Information System

CONSTITUTION

Adopted February 17, 1977
Revised June 30, 1977
Revised March 30, 1978

ARTICLE I

NAME

The name of this consortium shall be EUREKA, The California Career Information System, hereinafter referred to as "EUREKA".

ARTICLE II

GOALS AND OBJECTIVES

The goals and objectives of this consortium shall be to foster development and use of career information, to provide practical means of direct access to current career and labor market information in forms which are meaningful to individual students and clients, and to promote integration of such information into schools and other public service agencies in this state of California.

ARTICLE III

CONSORTIUM

Section 1. Membership. Application for consortium membership, or invitation to consortium membership by the EUREKA Board, shall be open to those agencies and institutions which are nonprofit as defined by the state, are using the System at an appropriate level of use in accord with Board policy, and are providing an equitable share of the financial resources for support of EUREKA as determined by the Board.

Section 2. Authority. Consortium members may nominate people for the consortium's Board, vote for Board members, and make recommendations to the Director or to the Board. Consortium members are entitled to one vote per user contract.

Section 3. Removal. Upon violation of the contract governing use of EUREKA, consortium members may be removed by majority vote of the Board.

Section 4. Reinstatement. Consortium members who have been removed may be reinstated by majority vote of the Board.

Section 5. Meetings. The Board will adopt procedures for calling meetings of the consortium.

ARTICLE IV

BOARD

Section 1. Authority. The EUREKA Board shall interpret the goals and objectives of the consortium, shall set priorities for EUREKA, and shall make recommendations to the Director for their implementation, within the limits of applicable laws and regulations.

Section 2. Nomination. Candidates for the EUREKA Board may be nominated by consortium membership in accordance with provisions of Section 4.

Section 3. Election. Members of the EUREKA Board shall be elected in the spring by secret ballot of a majority of the consortium membership. Newly elected Board members shall take office at the next regular meeting.

Section 4. Composition. The initial EUREKA Board shall consist of those individuals who have held regular membership in the EUREKA organization and who choose to accept such membership when polled. During the spring 1978 election by the consortium membership, approximately one third of these members will be selected by lot to be replaced by three members elected by the consortium. Officers shall be exempt from the lot. During the spring 1979 election, approximately one half of the remaining members of the original Board will be selected by lot to be replaced by three members elected by the consortium. During the spring 1980 election, the remaining members of the original Board will be replaced by three members elected by the consortium.

Thereupon, the EUREKA Board shall consist of nine voting members who shall be persons affiliated with consortium members. At least one Board member shall be selected from each major category of consortium members as follows: secondary schools, community colleges, county offices of education, and public service agencies. Additional non-voting representatives from interested agencies or institutions shall be elected by the Board.

Section 5. Tenure. The term of office for a Board member shall be three years with no Board member eligible to serve more than six consecutive years. The terms of the members of the EUREKA Board shall be staggered.

Section 6. Resignation. Members of the Board may resign by giving written notice to the Board Chairer.

Section 7. Removal. Upon failure to attend three consecutive regular meetings or two-thirds of all meetings during the immediately preceding twelve months or portion thereof that the member has been in office, the Chairer shall declare that position vacant.

A member of the EUREKA Board may be removed by two-thirds vote of the Board membership.

Section 8. Reinstatement. A person who has been a Board member may be reinstated by a two-thirds vote of the Board membership.

Section 9. Leaves of Absence. The Board may approve extended leaves of absence.

Section 10. Filling Vacancies. Subject to provisions of Article IV, Section 4, the Board may appoint a representative from the appropriate consortium member category to complete an unexpired term vacated by resignation or removal.

ARTICLE V

BOARD OFFICERS

Section 1. Positions. Board officers shall be nominated and elected by the EUREKA Board at the first meeting after the election to the Board.

Section 2. Nominations. Nomination for Board Officers shall be by nominating ballot. If one member receives two-thirds of the nominating votes for a Board office, that member is elected. If no member receives two-thirds or more of the nominating votes, the two members receiving the highest number of votes shall be so nominated. Ties will be broken by chance. Nominations shall be accepted from the floor.

Section 3. Election. Election to the office will be determined in a secret ballot by a majority vote of the EUREKA Board members present.

Section 4. Term of Office. The term of office shall be one year with no member serving more than two consecutive terms in each office. Vacancies in either position are to be filled by Board action as prescribed in Article V, Sections 2 and 3.

Section 5. Duties. The Chairer of the Board shall preside over Board meetings. The Chairer shall be authorized to execute documents on behalf of the Board. In the absence of the Chairer, the Vice-Chairer shall assume those duties of the Chairer.

Section 6. Removal. Board members may be removed from the office of Chairer or Vice-Chairer by a two-thirds vote of the EUREKA Board.

ARTICLE VI

BOARD MEETINGS

Section 1. Regular Meetings. Regular meetings of the Board will be held at least each spring and fall at times and places determined by the Board Chairer and the Director, rotating between Northern and Southern California.

Section 2. Special Meetings. Special meetings may be called by the Chairer or three members of the EUREKA Board upon at least five days notice. All agenda items to be considered must accompany notice of the meeting.

Section 3. Quorum. A majority of the EUREKA Board will constitute a quorum.

Section 4. Agenda Items. The Board Chairer, in cooperation with the Director, shall prepare an agenda. Any Board member may place an item on the agenda by notifying the Chairer. Unless five days prior notice has been given of the pending consideration of an agenda item, any member of the EUREKA Board may request that item to be held over to the next regular meeting.

Section 5. Open Meetings. All regular and special meetings of the EUREKA Board shall be open to the public, except personnel matters which may be held in executive session unless all parties waive that right.

Section 6. Parliamentary Authority. Roberts Rules of Order will be the rules for the conduct of Board meetings, in so far as they do not conflict with this constitution.

Section 7. Voting. Each member of the Board shall be entitled to one vote. The concurrence of a majority of the members present is required for Board action.

ARTICLE VII

FISCAL AND ADMINISTRATIVE AGENCY

EUREKA, The California Career Information System, Inc., a non-profit corporation will house the Office of the Director and has legal responsibility for the work of the staff. The Corporation will receive and disperse funds on behalf of the System and in furtherance of its goals will provide personnel, accounting, legal, and other administrative services under terms of applicable laws and administrative policies.

ARTICLE VIII

DIRECTOR

Section 1. Duties. The Board shall employ a Director who shall be the administrative head of EUREKA.

Section 2. Board Membership. The Director, who shall serve as an ex-officio, non-voting member of the EUREKA Board, shall keep the Board advised at all times of the affairs and needs of the System.

Section 3. Personnel. Subject to Board policy, the Director shall appoint or remove appointive personnel from positions within the System.

Section 4. Purchasing. Subject to Board policy, the Director shall act as purchasing agent for the EUREKA System.

Section 5. Reporting. The Director will be responsible for developing and operating budgets in accord with rules of the EUREKA Corporation, preparing and submitting annual budget estimates and such reports as the Board requests.

ARTICLE IX

TASK FORCES

The Director may appoint standing or ad-hoc task forces to advise him or her on such matters as finance, system design, problem solving, marketing, etc. Persons appointed to task forces need not hold Board membership, but may be personnel from EUREKA user agencies or other persons with expertise in the subject of the task force.

ARTICLE X

AMENDMENTS

A motion to amend the constitution must be presented at a regular Board meeting at least one meeting before any action may be taken. A vote by a Board member may be sent to the Chairer before the next official Board meeting.

ARTICLE IX

DISSOLUTION

This consortium may be dissolved by two-thirds roll-call vote of the full Board membership provided ten days written notice of intent has been given all members. If reasonable attempts to obtain attendance for voting on dissolution have failed, the Chairer may conduct such a vote by mail.

EUREKA POLICIES AND PROCEDURES

ARTICLE I

BOARD MEMBERSHIP

Section 1. Election of Consortium Members to the Board. Procedures for the election of representatives from the consortium to the EUREKA Board shall be adopted by the Board.

Section 2. Resignations. Resignation shall be recognized only by a written notice submitted to the Board by the school, college, or agency represented by the member. Such resignation shall be recorded in the minutes of the meeting immediately following receipt of the resignation.

Section 3. Notice of Removal of Member. The Secretary shall notify the individual removed from membership, and the school, college, or agency represented by the former member, of the action by the Board.

ARTICLE II

BOARD MEETINGS

Section 1. Notice of Meetings. Notice of the time and location of each regular meeting shall be provided to all Board members at least two weeks prior to the meeting.

Section 2. Recording of Votes. The ayes and nays shall be taken by voice or ballot upon all propositions presented to the Board for action and the passage of non-passage shall be recorded in the Board minutes.

Section 3. Committees. Advisory and other committees may be established by the Board when such action is consistent with the constitution and policies established by the Board. (e.g. Membership Subcommittee, Audit Subcommittee, Planning Subcommittee, Advisory Committee, etc.).

Section 4. Non-Voting Participation. An absent member may designate an alternate to participate at a Board meeting as a non-voting representative.

ARTICLE III

ORGANIZATION OF THE BOARD

Section 1. Organizational Meeting. At its first meeting subsequent to the election of members of the Board, the Board shall organize by electing the following officers: Chairer, Vice-Chairer, Secretary, and Treasurer.

Section 2. Chairer-Director Consultation. The Board Chairer and the Director will confer between Board meetings to prepare an agenda and sign documents on behalf of the Board.

Section 3. Responsibility of the Treasurer. The Treasurer shall assure that all funds, property, and tangible rights of EUREKA are inventoried and protected, that commonly accepted budgetary procedures are maintained, and that information of this nature is readily available to the Board and to the chief administrator on all disbursements made by EUREKA. Further, the Treasurer shall be responsible for the development of an annual financial report to be presented at the annual meeting of the Board.

Section 4. Responsibility of the Vice-Chairer. In the absence of the Chairer, the Vice-Chairer shall chair the official meetings of the Board and shall sign such documents as may be necessary to fulfill the action of the Board.

Section 5. Responsibility of the Secretary. The Secretary shall be responsible for maintaining the minutes of the Board meetings and for conducting such correspondence between the Board and other agencies or individuals as shall be desirable.

ARTICLE IV

PERSONNEL

Section 1. Staff Support. The Board shall retain staff as needed. All staff shall be hired under contract.

Section 2. Director. The chief administrator shall be the Director who shall be an employee of the Board, and shall be directly responsible to the Board through the Chairer.

Section 3. Director's Authority to Spend. The Director will be permitted to authorize expenditures up to a $1,000 ceiling, and may consult Board members if in doubt about the expenditure being in line with Board policy.

ARTICLE V

CHANGES IN POLICIES, RULES, AND REGULATIONS

Section 1. Procedure. Policies, rules, and regulations of the Board may be adopted, revised, added to, or amended at any regular meeting of the Board by a majority vote of those members present.

Section 2. Notification. Proposed changes or additions shall be provided to Board members not less than two weeks prior to the meeting at which action is recommended.

EUREKA Aide Training

OBJECTIVE

To train students to assist people in the use of EUREKA materials, programs, and the computer terminal.

METHOD

Each student in training will meet with the supervising paraprofessional or counselor on a regular basis until Step One and part or all of Steps Two and Three are completed. The Trainer will be responsible for training the aide on a one-to-one basis using the methods outlined below.

Step One

Purpose: To teach aides about the basic operation of the computer terminal.

Process: The Trainer will explain and then demonstrate each procedure. The aide in training will then attempt each procedure. The Trainer will check off each operation when successfully completed. The aide may also want to study the QUEST chapter in the INSIDE EUREKA handbook.

( ) On-line

( ) Log-in

( ) QUEST - include:

- ( ) List
- ( ) Why Not
- ( ) Procedure for changing answers

( ) INFO	( ) SCH
( ) DESC	( ) BIB
( ) PREP	( ) VISIT
( ) PROG	( ) ATTR

Step Two

Purpose: To enable aides to assist people using EUREKA in specific situations.

Process: The Trainer will follow the procedure outlined for each situation and check it off when completed. Each situation may be a separate training session.

( ) SITUATION A

Trainer asks: "What if the person using EUREKA received no occupations?

Trainee: Responds

Trainer: Evaluates response, gives additional suggestions if appropriate.

Together: Discuss reasons why situation might occur; how the person using EUREKA might feel in that situation.

Step Two (cont.)

( ) SITUATION B

Trainer asks: "What if the person using EUREKA receives 150 occupations?"

Trainee: Responds

Trainer: Evaluates response, gives additional suggestions if appropriate.

Together: Discuss reasons why situation might occur; how the person using EUREKA might feel in that situation.

( ) SITUATION C

Trainer asks: "What if the person using EUREKA gets a list which contains many occupations that he or she feels are inappropriate?"

Trainee: Responds

Trainer: Evaluates response, gives additional suggestions if appropriate.

Together: Discuss reasons why the situation might occur; how the person using EUREKA might feel in that situation.

( ) SITUATION D

Trainer asks: "What if the person using EUREKA says, 'I want to be a professional baseball umpire (or football referee), but I can't find it in the list of occupations.'"

Trainee: Responds

Trainer: Evaluates response, gives additional suggestions if appropriate.

Together: Discuss reasons why situation might occur; how the person using EUREKA might feel in that situation.

Step Three

Purpose: To assist aides in identifying referral methods and referral sources.

Process: Aides should first be reminded that there are limits upon their training and experiences which restrict the services they can provide and that sometimes the best service they can offer is to refer the client to a member of the professional guidance staff. The trainer will follow the procedures outlined for each situation and check it off when completed. Each situation may be a separate training session.

( ) SITUATION A

Trainer asks: "What if a student says, 'I need to find a job because I'm going to flunk out of school. Can you help me?'"

Trainee: Responds

Step Three (cont.)

Trainer: Evaluates response, discusses referral process, and, if appropriate, gives additional suggestions.

Together: Discuss reasons why this situation might occur; how the person seeking help might feel in this situation.

( ) SITUATION B

Trainer asks: "What if the user continually makes reference to a recent divorce and how it has caused him or her not to care about attending college next year?"

Trainee: Responds

Trainer: Evaluates response, discusses referral process, discusses client confidentiality, and, if appropriate, gives additional suggestions.

Together: Discuss reasons why this situation might occur; how the person using EUREKA might feel in this situation.

( ) SITUATION C

Trainer asks: "What if the person using EUREKA continually responds with 'no preference' or 'not sure' when responding to the questions in QUEST?"

Trainee: Responds

Trainer: Evaluates response, discusses referral process, and, if appropriate, gives additional suggestions.

Together: Discuss reasons why this situation might occur; how the person using EUREKA might feel in this situation.

EUREKA AIDE STUDY QUESTIONS

Instructions: Answer the following questions as completely as you know how.

1. How can I find out which community colleges offer coursework in Beautician Training:

_____

2. How can I obtain a list of the occupations in the Health Services occupational group?

_____

3. If Photographer isn't among the occupational titles on my QUEST list, how can I find out which answers eliminated it?

_____

4. After obtaining a QUEST list, I decide that I want to increase my beginning wage from $700 to $1000. How can I do it and get another QUEST list?

_____

5. How can I find out which high school subjects would be appropriate in order to become a Registered Nurse?

_____

6. How can I obtain the name of a Printer with whom my students can discuss that occupation?

_____

7. Using EUREKA, I found out how much it would cost me to attend U.C. Davis and live in the dormitory. However, I only have half as much money as I need to attend. How can I find out what kind of help U.C. Davis can provide and how much it might be?

_____

8. How can I find out what kind of coursework is required in order to become a Physical Therapist?

_____

9. How can I compare the procedures for applying for financial aid at Laney College, Occidental College, and California Institute of Technology?

_____

10. Where can I get a list of the kinds of information stored in EUREKA and directions for obtaining it?

_____

What Users Should Know About the Revised QUEST

by

John S. Clyde
Michael McKeever

Oregon Career Information System

Over the last seven years, QUEST has been used throughout the country by several million people as an aid in career planning. It is well recognized now as an exploration tool that assists people in finding occupations that relate to their interests and abilities. Basically, QUEST has been designed as a component of the Career Information System, with its primary purpose to motivate people to start searching the System's information files.

Revisions to QUEST have been carried on almost continuously by Dr. Bruce McKinlay and his staff at the University of Oregon. Four years ago the research and development process increased in scope with researchers examining the possible usefulness of several new items for QUEST. From this research evolved the revised QUEST; an instrument which contains about an even mixture of new and old items.

An interesting worker trait included in the Dictionary of Occupational Titles--Temperaments--is based on the assumption that different jobs call for different personal traits on the part of the worker. Experience in placing individuals in jobs indicates that the "temperament" of an applicant is often the determining factor in his or her success on the job. The revised QUEST incorporates eight new Temperaments questions (called Nature of Work in QUEST) that have been pilot-tested with over 750 users in junior and senior high schools, community colleges, and social agencies. They replace the Data-People-Things Interests items, questions number 13 through 23 in the old QUEST.

The Temperaments items include:[1]

1. CONTINUOUS On some jobs you do the same things many times a day and you work at a steady pace. Would you want to do this type of work?

ANSWER	CODE WORD
Yes, I would	YES
No, I would not	NO
No preference or I'm not sure	NP

2. PRECISE On some jobs there is little room for error so you must be very exact in your work. Would you want to do this type of work?

[1]The Department of Labor's Handbook for Analyzing Jobs actually includes ten temperaments. We have chosen to delete two of these: (1) Performing Under Stress--not included because it eliminates too few occupations; and, (2) Sensory by Judgmental Criteria--a concept that seemed to vague for users to understand.

3. USING FACTS On some jobs you have to inspect and analyze factual information to reach conclusions. Would you want to do this type of work?

4. WORKING WITH OTHERS On some jobs you must deal with many different people to get your work done. Would you want to do this type of work?

5. PERSUADING, SELLING On some jobs you sell or try to convince people of something. Would you want to do this type of work?

6. DECISION-MAKING On some jobs you are responsible for making final decisions about projects, plans and other people's duties. Would you want to do this type of work?

7. CHANGE On some jobs you must move often from one task to another and use several different skills. Would you want to do this type of work?

8. CREATIVE On some jobs you must interpret ideas and express feelings in creative ways. Would you want to do this type of work?

Temperaments items appear to have several advantages to the user. First, they are easier to understand than the Data-People-Things items. Importantly, they do not rely on the use of occupational examples to illustrate the concept. This avoids the problem of potentially biasing the user's response to the question because of a stereotype he or she may have about a certain occupation or occupations used in the example. Second, users like the topics addressed in these questions. Talking about job-worker "personality-matches" and the environment in which work takes place are popular topics today and users have seen these questions as very relevant to their career planning process. Third, Temperaments appear to be a good base on which to build meaningful curriculum. This is important because curriculum "recipes" will have to be written for the Temperaments items.

One of the most important results of this research project was implemented last year when the format of the Abilities items was changed from asking the users to self-report their abilities to asking them to express a preference for what ability levels they would like to use in a job. In short, QUEST no longer asks "How much ability do you have?", but "How much ability do you want to use in a job?" The distinction is important and response to the change has been very positive. It helps to identify QUEST more clearly as an exploratory tool to be experimented with by the user and not as a test designed to measure and predict.

The revised QUEST contains two new Abilities items; EYE-HAND COORDINATION (Motor Coordination) and SEEING DETAIL (Form Perception). The wording in the response categories for all Abilities items has been altered somewhat but they still refer to the same percentage of the general population. They are:

(1) LOW Ability (that represents the bottom 33% of the general population);

(2) MEDIUM Ability (which includes the middle 50%);

(3) HIGH Ability (as represented in the top 10% of the population).

The Abilities questions in Revised QUEST are as follows:

9. EYE-HAND COORDINATION You would need to be good at handling things quickly as you see them. You might have to be quick and accurate at sorting or operating things. Mark the highest level of coordinating eye and hand movements you want to use on a job.

ANSWER	CODE WORD
Low ability to coordinate eye and hand movements	ELO
Medium ability to coordinate eye and hand movements	EM
High ability to coordinate eye and hand movements	EHI
I'm not sure how much of this ability I want to use	ENS

10. WORKING WITH FINGERS You would need to be able to do very precise work with your fingers. You might have to handle small things easily, quickly and accurately. Mark the highest level of working with fingers you want to use on a job.

ANSWER	CODE WORD
Low ability to work with fingers	FLO
Medium ability to work with fingers	FM
High ability to work with fingers	FHI
I'm not sure how much of this ability I want to use	FNS

Questions 9 and 10 relate to similar physical abilities, however, the user does differentiate between the two questions and both questions relate to abilities needed in various occupations.

11. CHECKING ACCURACY You would need to copy words or numbers accurately. You might have to be good at things like proofreading written materials. Mark the highest level of checking accuracy you want to use on a job.

12. ABILITY WITH WORDS You would need to read and follow instructions. You might have to express yourself clearly when writing or talking with people. Mark the highest level of ability with words you want to use on a job.

13. ABILITY WITH NUMBERS You would need to do addition, subtraction, multiplication, and division. You might have to solve arithmetic problems quickly and accurately. Mark the highest level of ability with numbers you want to use on a job.

Since there is some indication that users may under-report with this question, a question was developed dealing with the user's math development (i.e., users stated whether they had completed basic arithmetic, algebra, trigonometry, etc.) Interestingly, younger students misunderstood the question, since they didn't know the meaning of these mathematical terms or levels. Consequently, researchers returned to this question as the better way for the user to indicate the level of arithmetic ability they want to use on the job. It is important to stress with Question 13, as in other Abilities questions, that QUEST does not ask the user to report on ability, but rather to express a preference. However, if the user finds it difficult to express a preference for any particular ability, it might be helpful for the user to take a good ability test, like the GATB. The results might make it easier for some users to express a preference for which level of ability they would like to use.

14. CATCHING ON TO THINGS You would need the ability to learn procedures and understand the reasoning behing them. You might have to be good at figuring out complicated things. Mark the highest level of catching on to things you want to use on a job.

15. SEEING DETAIL You would need to be able to tell slight differences in shapes in objects and lengths of lines. You might have to be able to see detail in objects, pictures or drawings. Mark the highest level of seeing detail you want to use on a job.

Revised QUEST does not include questions having to do with eyesight and hearing ability. There are a number of reasons for deleting these questions from the list:

1) Data for coding these questions is of questionable accuracy (a thorough search for better data reaped no results);

2) Users occasionally misinterpret these questions;

3) There is a tendency for these questions to shut doors for handicapped individuals.

Question 16 in the new QUEST expands the old lifting question and includes different amounts of physical activity. It reads as follows:

16. PHYSICAL ACTIVITY Jobs require different amounts of physical activity. Would you be able and willing to be very active, often handle 50 pounds objects and sometimes lift 100 pounds or more?

ANSWER	CODE WORD
Yes, I would	YES
No, (I couldn't or wouldn't want to)	CD
No preference or I'm not sure	NP

In the computer version, if the user answers 'CD', "No, (I couldn't or wouldn't want to)" the computer will respond with:

What is the most activity you would be able and willing to do?

ANSWER		CODE WORD
MEDIUM	Moving around a lot and handling objects 10 to 25 pounds	MED
LIGHT	Moving around some and handling objects usually under 10 pounds	LIGH
SITTING	Rarely moving around. Usually sitting	SIT
NO PREFERENCE or I'm not sure		NP

(TYPE IN: MED, LIGH, SIT or NP)

Pilot testing of this question indicates that users like the additional options these response categories provide. The "Sitting" response should be particularly useful to handicapped users.

17. EDUCATION AND TRAINING How much education and training will you have when you enter your career field? Consider your present education plus additional education you would take. Circle the longest education or training program you would be willing to complete.

ANSWER	CODE WORD
No special education, training or experience before starting the job	NO
No more than high school graduation (or G.E.D.) and a short training period	HS
Up to one year of full-time schooling (or two years of apprentice-type training)	ONE
Up to two to three years of full-time schooling (or three to four years of apprentice-type training)	TWO
Up to four-year college degree or equivalent	FOUR
Any amount of education, including university graduate school training	ANY

Due to the increased minimum wage and spiraling worker earnings, the wage scale has been raised to $1,500 per month. This question continues to be a most important one for adult users.

18. BEGINNING WAGE How much must an occupation pay (for regular, full-time work) before you would consider it? These wages refer to the average starting rate before deductions; you would earn more with experience.

ANSWER	CODE WORD
Not sure or not important at this time	NI
At least the minimum wage to start	MIN
At least $700-$900 per month ($4.03 - $5.75 per hour)	700
At least $1,000-$1,249 per month ($5.76 - $7.20 per hour)	1000
At least $1,250-$1,499 per month ($7.21 - $8.64 per hour)	1250
At least $1,500 per month ($8.65 per hour)	1500

Question 19 -- WORK SETTING -- continues to be a good question and has been modified only slightly. It reads:

19. WORK SETTING Where would you like to work?

ANSWER	CODE WORD
Mostly outdoors	OUT
Mostly indoors or under shelter	IN
No preference or I'm not sure	NP

20. CITY SIZE Some people want to work only in a large city; others want to work in a small city; others want to work in a small town. What size community are you willing to work in?

Only in a large city (like Los Angeles, San Francisco, San Diego)	LM
Only in a small city (like Salinas, Bakersfield, San Bernardino)	SC
Only in a small town, rural area	RUR
In a large city or small city, but not a small town or rural area	LMSC
In a small city, small town, or rural area, but not a large city	SCR
No preference about city size, I am willing to work in any size community	NP

21. REGION Where are you willing to work?

Only in the greater San Francisco Bay Area	SF
Only in the Sacramento-San Joaquin Valley Area	SAC
Only in the Los Angeles-Southern California Coastal Area	LA
Elsewhere in California	OTHER
Anywhere in California	CAL
Anywhere in the U.S.	US

Users need to know that if occupations are eliminated from a particular area in Question 21, this doesn't necessarily mean that the occupations are non-existent in that area, but rather, that the number employed is so low in those occupations in the area that it is impractical to report that employment can be found.

At one point in this latest revision, Oregon's research staff was using a questionnaire with over 40 questions. They found that the more questions users were asked to respond to, the fewer occupations remained on the user's list. This present revision of twenty-one questions produces good occupational lists for users. Users have found on the average eight occupations on their revised QUEST lists which they thought were interesting and worth seeking more information about. Eighty-seven percent of the users in another pilot test said the QUEST List gave them "new relevant occupations they would seriously consider for future work." The indication is clear that QUEST does identify relevant occupations for the user, an important test of its value.

Another related test of the quality of QUEST is whether it facilitates user access to the information files. In a recent pilot test, eighty-four percent of the users went on to access at least one of the occupational descriptions. But perhaps more important to a User Services staff which must market this product is the evidence indicating that users like to use it. Ninety-six percent said they thought "QUEST and QUEST List were good ways to learn about occupations" and eighty-eight percent said they would use QUEST again.

QUEST is a very sensitive instrument. Much thought has been taken before changing it. The revised QUEST is a good one, but the research effort will continue, as CIS continues to look for increasingly better ways to help people explore occupations.

STRONG-CAMPBELL INTEREST INVENTORY/EUREKA CONVERSION TABLE

Strong-Campbell Occupational Criterion Groups		Corresponding Eureka Occupations
Accountant (f,m)	1614	Accountants
Advertising Executive (f,m,)	1162	Sales & Service Managers
	1195	Public Relations Workers
	4724	Commercial Artists & Designers
	7422	Business Services Salespeople
Agribusiness Manager (m)	4164	Farmers & Farm Managers
	1162	Sales & Service Managers
	1142	Small Business Operators
Air Force Officer (m)	1172	Military Officers
Architect (m)	2316	Architects
Army Officer (f,m,)	1172	Military Officers
Art Teacher (f)	8456	Elementary & Secondary Teachers
	4724	Commercial Artists & Designers
Artist (f,m,)	5982	Handcrafters
	4724	Commercial Artists & Designers
Banker (f,m)	1636	Loan Officers
	1144	Business Executives
Beautician (f)	8186	Cosmetologists
Biologist (m)	2611	Biologists
	8454	University & College Teachers
Business Education Teacher (f,m)	8456	Elementary & Secondary Teachers
Buyer(f,m)	1184	Purchasing Agents
Cartographer (m)	2364	Drafters
Chamber of Commerce Executive (m)	1195	Public Relations Workers
Chemist (f)	2618	Chemists
Chiropractor (m)	8122	Chiropractors
College Professor (f,m)	8454	University & College Teachers
Computer Programmer (f,m)	1684	Programmers
Computer Sales (m)	7422	Busiess Services Salespeople
Credit Manager (f,m)	1636	Loan Officers
Dental Assistant	8176	Dental Assistants
Dental Hygienist (f)	8174	Dental Hygienists
Dentist (f,m)	8113	Dentists
Department Store Manager (m)	1162	Sales & Service Managers
Department Store Sales	7454	Salespersons
	7484	Sales Clerks
Dietitian (f,m)	8116	Dietitians
Director Christian Education(f)	1136	Education Administrators
Elementary Teacher (f,m)	8456	Elementary & Secondary Teachers
Engineer (f,m)	2400	Engineering Occupations
English Teacher (f,m)	8456	Elementary & Secondary Teachers
Entertainer (f)	9866	Performing Artists
Executive Housekeeper (f)	3456	Domestic Service Workers
Farmer (m)	4164	Farmers & Farm Managers
Flight Attendant (f)	7356	Flight Attendants
Forester (m)	4124	Foresters
	4128	Forestry Technicians
Funeral Director (m)	8182	Morticians
Guidance Counselor (f,m)	8414	Counselors
Highway Patrol Officer (m)	9414	Law Enforcement Officers
Home Economics Teacher (f)	8456	Elementary & Secondary Teachers
Instrument Assembler (f)	5686	Electronics Assemblers
Interior Decorator (f,m)	2366	Decorators & Designer (Interior)
Investment Fund Manager (m)	7415	Securities Salespeople

Strong-Campbell Occupational Criterion Groups		Corresponding Eureka Occupations
Language Interpreter (f)	No Corresponding Occupation	
Language Teacher (f)	8456	Elementary & Secondary Teachers
Lawyer (f,m)	8432	Lawyers
Librarian (f,m)	8462	Librarians
Life Insurance Agent (f)	7416	Insurance Salespeople
Mathematician (f,m)	2332	Mathematicians
Math-Science Teacher (f,m)	8456	Elementary & Secondary Teachers
Medical Technologist (f,m)	2654	Health Technicians/Technologists
Merchant Marine Officer (m)	1172	Military Officers
	1173	Naval Officers
Minister (m)	8436	Clergy
Musician (f,m)	9866	Performing Artists
Navy Officer (m)	1172	Military Officers
	1173	Naval Officers
Nurse, Licensed Practical (f,m)	8164	Licensed Practical Nurses
Nurse, Registered (f,m)	8162	Registered Nurses
Occupational Therapist (f)	8125	Occupational Therapist
Optometrist (f,m)	8115	Optometrists
Personnel Director (m)	1186	Personnel Managers
Pharmacist (f,m)	8124	Pharmacists
Photographer (m)	4734	Photographers
Physical Education Teacher	8456	Elementary &Secondary Teachers
Physical Scientist (m)	8127	Physical Therapists
Physical Therapist (f,m)	8126	Health Therapists
Physician (f,m)	8112	Physicians
Physicist (f)	2621	Physicist
Police Officer (m)	9414	Law Enforcement Officers
Priest (m)	8436	Clergy
Psychologist (f,m)	8418	Psychologists
Public Administrator (m)	1138	Public Administrators
Purchasing Agent (m)	1184	Purchasing Agents
Radiologic Technician (f)	2654	Health Technicians/Technologists
Realtor (m)	7417	Real Estate Salespeople
Recreation Leader (f,m)	8486	Recreation Leaders
	8488	Recreation Aides
	8482	Recreation Program Directors
Reporters (f,m)	2176	Writers & Editors
Sales Manager (m)	1162	Sales & Service Managers
School Superintendent (m)	1136	Education Administrators
Secretary (f)	1412	Secretaries
	1414	Stenographers
Skilled Crafts(including carpenters, electricians, tool & die makers) (m)	4254	Carpenters
	5626	Electricians & Electrical Repairers
	5462	Tool & Die Makers
Social Science Teacher (f,m)	8456	Elementary & Secondary Teachers
	2144	Social Scientists
	2142	Sociologists
Social Worker (f,m)	8416	Caseworkers
Speech Pathologist (f,m)	8128	Speech Pathologists/Audiologists
Veterinarian (f,m)	8114	Veterinarians
Vocational Agriculture Teacher (m)	8454	University & College Teachers
	8456	Elementary & Secondary Teachers
YMCA Staff (f)	8486	Recreation Leaders
	8482	Recreation Program Directors

KUDER DD/EUREKA CONVERSION TABLE

OCCUPATIONAL SCALES - MALE NORMS

Acc't,Certified Public	1614	Accountants
Architect	2316	Architects
Automobile Mechanic	3112	Automobile Mechanic
Automobile Salesman	7418	Automobile Salespeople
Banker	1636	Loan Officer
Bookkeeper	1616	Bookkeeper
Bookstore Manager	1142	Small Business Operators
Bricklayer	4262	Bracklayers
Building Contractor	1152	Constructions Superintendant
Buyer	1181	Buyer
Carpenters	4254	Carpenters
Chemist	2618	Chemists
Clothier, Retail	7484	Sales Clerk
	7454	Salespersons
Computer Programmer	1684	Programmer
Counselor, High School	8414	Counselors
County Agricultural Agent	2414	Agricultural Engineers
	2628	Soil Scientists
	2631	Agricultural Scientists
Dentist	8113	Dentists
Electrician	5626	Electricians & Elect. Repairer
Engineer, Civil	2356	Engineering Technicians
Engineer, Electrical	2422	Electrical Engineer
Engineer, Heating Air Condition	3146	Heat & Cooling Systems Mechanic
Engineer, Industrial	2424	Industrial Engineers
Engineer, Mechanical	2428	Mechanical Engineer
Engineer, Mining & Metal	2431	Metallurgical Engineers
Farmer	4164	Farmers & Farm Managers
Florist	4146	Floral Designers
Forester	4124	Foresters
Insurance Agent	7416	Insurance Salespeople
Interior Decorator	2366	Interior Designers & Decorators
Journalist	2176	Writers & Editors
Lawyer	8432	Lawyer
Librarian	8462	Librarian
Machinist	5464	Machinists
Mathematician	2332	Mathematicians
Math Teacher, High School	8456	Elementary & Secondary Teachee
Meteorologist	2629	Astronomers
Minister	8436	Clergy
Nurseryman	4144	Groundkeepers & Gardeners
Optometrist	8115	Optometrists
Osteopath	8112	Physicians
Painter, House	4242	Painters
Pediatrician	8112	Physicians
Personnel Manager	1186	Personnel Manager
Pharmaceutical Salesman	7454	Salespersons
Pharmacist	8124	Pharmacists
Photographer	4724	Photographers
Physical Therapist	8127	Physical Therapists
Physician	8112	Physicians
Plumber	4274	Plumbers
Plumbing Contractor	4274	Plumbers

OCCUPATIONAL SCALES - MALE NORMS (cont.)

Podiatrist	8112	Physicians
Policeman	9414	Law Enforcement Officers
Postal Clerk	1456	Messengers
	7122	Mail Carriers
Printer	4766	Printing Proguction Occupation
Psychiatrist	8112	Physicians
Psychologist, Clinical	8418	Psychologists
Psychologist, Counseling	8418	Psychologists
	8414	Counselors
Psychologist, Industrial	8418	Psychologists
Psychology, Professor	8418	Psychologists
Radio Station Manager	9824	Radio & Television Announcers
Real Estate Agent	7417	Real Estate Saiespeople
Sales Eng. Heating/Air Con	7454	Salespersons
Science Teacher, High School	8456	Elementary & Secondary Teacher
School Superintendent	1136	Education Administrators
Social Worker, Group	8424	Social Service Specialists
Social Caseworker	8416	Caseworkers
Social Worker, Psychiatric	8416	Caseworkers
Statistician	2331	Statistician
Supv/Foreman, Industrial	1154	Production Superintendents
Travel Agent	1424	Travel Agent
Truck Driver	6144	Truck Driver
Television Repairman	3168	Radio & TV Service Technicians
University Pastor	8436	Clergy
Veterinarian	8114	Veterinarians
Welder	5482	Welders
X-Ray Technician	2654	Health Technicians/Technologists
YMCA Secretary	1412	Secretaries

OCCUPATIONAL SCALES - FEMALE NORMS

Accountant	1614	Accountants
Bank Clerk	1644	Bank Clerks
	1400	Clerical Occupations
Beautician	8186	Cosmetologists
	8184	Barber
Bookkeeper	1616	Bookkeepers
Bookstore Manager	1142	Small Business Operators
Computer	1686	Computer Operators
	1684	Programmer
Counselor, High School	8414	Counselor
Dean of Women	1136	Administrators
Dental Assistant	8176	Dental Assistants
Department Store Sales	7484	Sales Clerks
	7454	Salespersons
Dietitian Administrative	8116	Dietitian
Dietitian, Public School	8116	Dietitian
Florist	4146	Floral Designers
Home Demonstration Agent	7422	Business Service, Salespeople
Home Ec Teacher, College	8454	University & College Teacher
Interior Decorator	2366	Interior Designers & Decorator
Lawyer	8432	Lawyer
Librarian	8462	Librarian
Math Teacher, High School	8456	Elementary & Secondary Teacher

COLLEGE MAJOR SCALES MALE NORMS

Agriculture	061	Agriculture
Animal Husbandry	174	Animal Grooming and Training
Architecture	081	Architecture
Art & Art Education	311	Art
Biological Sciences	131	Biology
Business Acc't & Finance	145	Business Management & Admin.
Business Marketing	146	Marketing
Business Management	145	Business Management & Admin.
Economics	583	Economics
Elementary Education	234	Elementary Education
Engineering Chemical	251	Engineering
Engineering Electrical	251	Engineering
Engineering Mechanical	251	Engineering
English	441	English and Literature
Foreign Languages	331	Foreign Languages
Forestry	068	Forestry
History	584	History
Mathematics	481	Mathematics
Music & Music Education	314	Music
Physical Sciences	521	Physical Sciences
Physical Education	235	Physical Education
Political Science & Govt	586	Political Science
Premed, Pharm & Dentistry	363	Medicine (MD)
Psychology	541	Psychology
Sociology	587	Sociology
U.S. Air Force Cadet	511	Military Science
U.S. Military Cadet	511	Military Science

COLLEGE MAJOR SCALES, FEMALE NORMS

Art & Art Education	311	Art
Biological Sciences	131	Biology
Business Ed & Commerce	145	Business Administration & Management
Drama	316	Drama, Theatre
Elementary Education	234	Elementary Education
English	441	English and Literature
Foreign Languages	331	Foreign Languages
General Social Sciences	012	General Studies-Social Science
Health Professions	376	Health Public
History	584	History
Home Economics Education	412	Home Economics
Mathematics	481	Mathematics
Music & Music Education	314	Music
Nursing	353	Nursing
Physical Education	235	Physical Education
Political Science	586	Political Science
Psychology	541	Psychology
Sociology	587	Sociology
Teaching Sister, Catholic		

G L O S S A R Y

ACCESS STRATEGY	A method for approaching the information files. QUEST is EUREKA's "access strategy."
ACOUSTIC COUPLER	A device used to connect a computer terminal to an ordinary telephone (the coupler converts the electrical pulses from the terminal to audio signals) so information can be transferred over telephone lines to and from a computer.
APTITUDES	Specific capacities or abilities required of an individual in order to facilitate the learning of some task. The aptitude section in the occupational description describes native or innate qualifications which are necessary to perform a job: physical capacities, mental abilities of various kinds, temperaments, and interests.
ATTR	The computer file containing the coding on attributes for each occupation in the system based on the twenty-one item QUEST questionnaire. Type in "ATTR" and the occupational code number to get a list of the answers that would keep the particular occupation on the QUEST list.
ATTRIBUTE	Characteristics of occupations. They are used in QUEST to identify occupations for career exploration.
BATCH MODE	Entry of data into a computer using IBM cards or special forms. Contrast with interactive mode.
BIB	The computer file containing bibliographic references to supplement the information contained in OIS.
CAREER	The totality of work one does in a lifetime.
CAREER EDUCATION	Informational and related services relevant to occupational exploration, preparation, and experience.
CLUSTER	A group of occupations which share a common, fairly specific function such as providing health services or administering an organization. Occupations within a cluster share a substantial core of skills and knowledge and are frequently interrelated by production process or work environment.
CONSORTIUM	The formal association of representatives from EUREKA user sites.
CRT	Cathode Ray Tube. A computer terminal with an electronic vacuum tub or TV-like screen for visual display of information sent to and from a computer.

CVIS	Computerized Vocational Information System, an early (1968) computer-based guidance system which had a powerful impact on using computers in counseling and capacity because it stores student records.
DATA ENTRY	Entering of data into a computer through a keypunch machine or computer terminal.
DISCOVER	An outgrowth of CVIS, DISCOVER is a complex computer-based career guidance and counselor-administrative support system which has 12 modules including one on values clarification and another on occupational information. It requires a large computer system and is consequently quite expensive to implement.
DOT	DICTIONARY OF OCCUPATIONAL TITLES, a Department of Labor publication which defines about 20,000 occupations. Designed as a job placement tool to facilitate matching job requirements and work skills, the DOT uses inter-relationships between job tasks and requirements to group occupations.
ENTRY WAGES	The amount of money a person entering an occupation without experience in the field can expect to earn. Entry wages may be stated in hourly, monthly or yearly rates.
FUNCTION	A special duty or performance required of a person thing in the course of work or activity. For example, the function of a Law Enforcement Officer is to protect and assist the public. The functional classification system used by EUREKA to group occupations classifies occupations on the basis of job characteristics or functions. It focuses on the dominant activity or central job duty, not on an overall skill level or some variable which is of little significance to some occupations.
GIS	Guidance Information System, a computer-delivered career information system which is a proprietary product of the Timeshare Corporation. GIS uses nationwide data files, and its printouts are rather cryptic to read.
HARD COPY	A record of computer inquires and responses printed on paper by a hard-copy computer terminal.
HARDWARE	Electronic or mechanical equipment used to process data; includes terminals, acoustic couplers, central processing units, disk drives, tape drives, multiplexers, etc.
HARDWIRE	A direct connection between a computer terminal and a computer. Because a cable connects the two, no modems, acoustic couplers, or telephones are used.

INFORMATION DEVELOPMENT	The part of the EUREKA staff responsible for the content of the system. They find sources of information and analyze, compile, and write this information in a usable and understandable form.
INTERACTIVE MODE	Keyboard entry of information into a computer which allows the user to interact or "converse" with the computer. Contrast with batch mode.
LICENSE	Official or legal permission to do a specific thing. Proof of the permission is usually granted in the form of a document or card issued by a governmental agency. The licensing section in the occupational and preparation statements provides information about exams and/or fees required for licensing for an occupation, including qualifications for licensing, procedures for obtaining a license, and agencies approved to grant licenses.
LOG-IN	A procedure for validating legitimate users and allowing them to run a particular computer program. In a typical "log-in" operation, the user types on the computer terminal a predefined sequence of numbers and passwords which are checked by the computer to protect against incorrect or unauthorized access into the programs.
OCCUPATION	Jobs are identified as comprising an occupation when they exhibit like job duties. They can normally also be expected to perform at about the same level of difficulty or responsibility and to require about the same skills, knowledge, and physical characteristics.
OOH	OCCUPATIONAL OUTLOOK HANDBOOK. An excellent national occupational information handbook published by the U. S. Department of Labor every other year. It is available for $8 from Government Printing Office Bookstores.
OUTLOOK	The section of the occupational description which describes the relationship between supply (workers) and demand (jobs) for an occupation. Outlook takes into consideration not only the projected growth for an occupation but also the turnover rate, the supply of people to fill the openings, and the health of the industries the occupation is primarily found in.
PASSWORD	A predetermined code word used to make available a particular computer program and to keep unauthorized people from using the system since only certain people know the proper word(s) to use.
PORT	The physical facility for connecting a line coming in from a user terminal to the computer.

PREPARATION	The education, training and experience required for employment in an occupation; also, relevant desirable preparation beyond minimum requirements. A preparation (PREP) statement can be obtained for any EUREKA occupation by typing "PREP" and the occupational code number.
PRINTOUT	See "HARD COPY"
SIGI	System of Interactive Guidance and Information; designed primarily for college students; runs only on the PDP-11 computer; includes value clarification but no localized data.
SOFTWARE	Computer languages, programs, and files. Contrast with "HARDWARE."
TAPE	Magnetic computer tape stored on reels and used to transfer data, in this case the EUREKA programs and files, from one computer to another.
TERMINAL	A device attached directly to a computer through telephone lines or other communications links and designed for user-computer interaction. There are a variety of types including cathode ray tubes (CRT) and teletypewriters (TTY).
TIME-SHARING	A method of computer operation in which the computer is shared by multiple users at what appears to be the same time. Although the computer actually services each user in sequence, its speed makes it appear as if all the users are handled simultaneously.
TRANSFER PROGRAMS	Programs at the associate degree level, usually established at community colleges, consisting of two years of college work of a type normally transferable to institutions which grant bachelor's degrees. These programs are accepted by many four-year institutions as the total completion of the first two years of a bachelor's degree program, including all general education requirements.
USER SERVICES	EUREKA staff who maintain contacts with users sites, conduct training workshops and demonstrations, and generally publicize the system.
WAGES	Straight-time compensation rates (before deductions) for specific occupations. Excludes fringe benefits such as insurance, vacation and retirement plans. May be stated in hourly, monthly or yearly rates.